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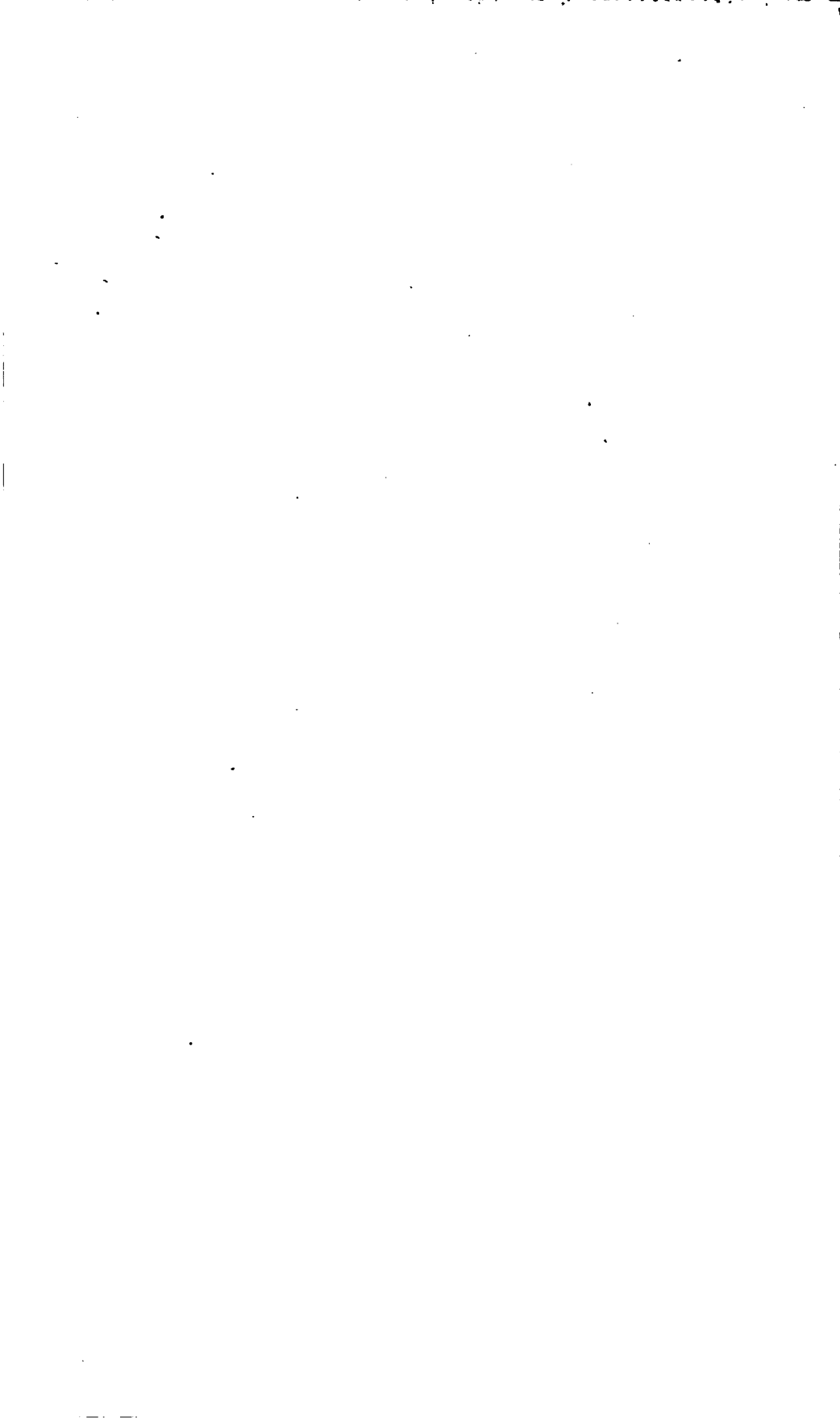
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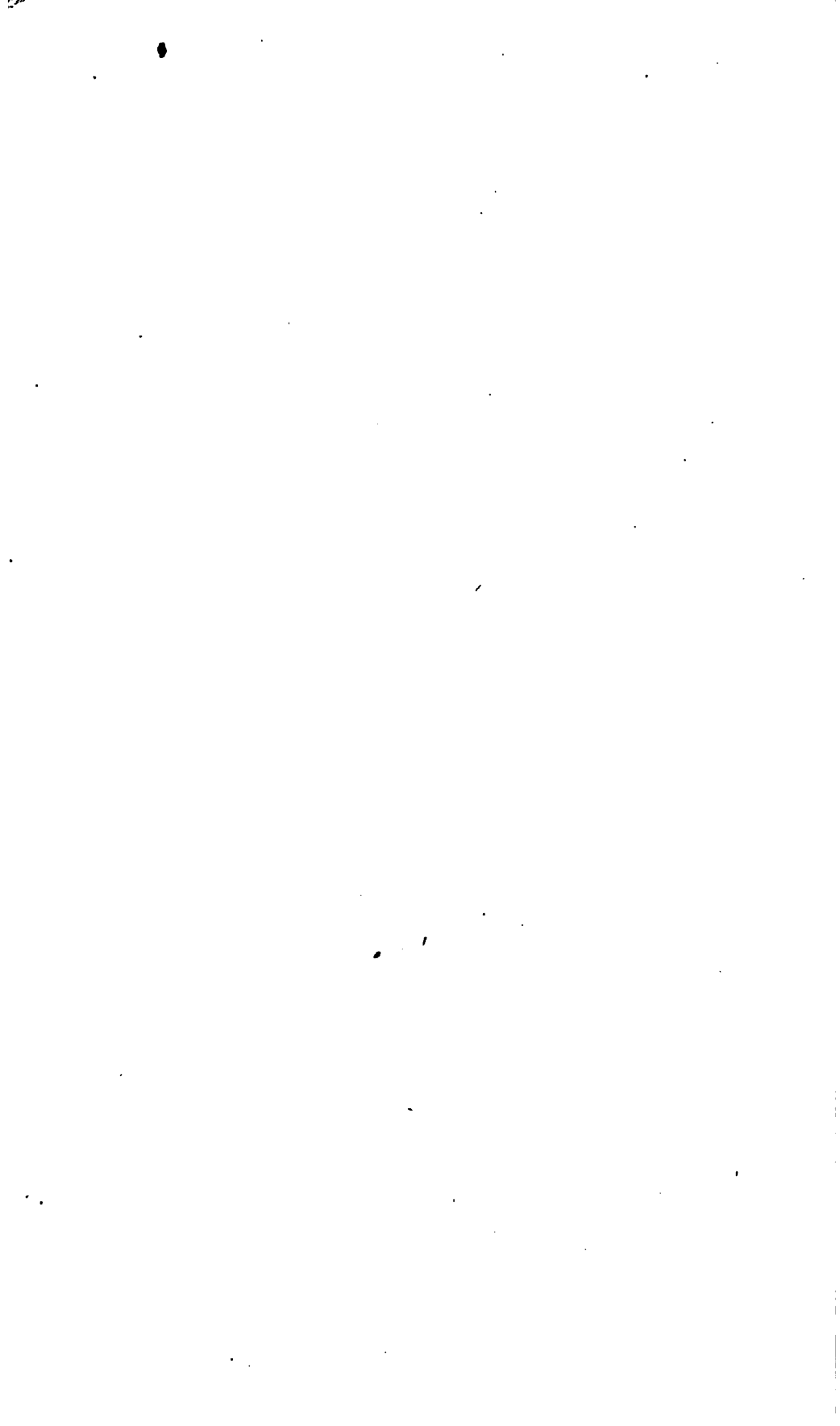


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AMERICAN ANTIQUITIES

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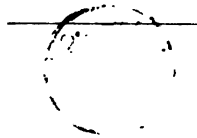
RESEARCHES

INTO THE

ORIGIN AND HISTORY OF THE RED RACE.

BY

ALEXANDER W. BRADFORD.



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PREFACE.

ANTIQUARIAN writings have so often been exposed to the charge of being replete with improbable conjectures, and conclusions which vanish at the touch of sober reason, that this interesting class of historical investigations seldom receives the perusal of the plain-thinking portion of the public. It was but just, therefore, to the subject of this work, to draw a line of distinction between facts, and the reasoning of the author upon those facts. For this reason, in the first portion of this volume, with but few exceptions, I have strictly confined myself to a description of the ancient American monuments, pursuing, in as faithful a manner as was consistent with proper brevity, the language of my authorities; and thus affording to the reader an opportunity to frame his own conclusions, and to test the accuracy of mine. Mr. Stephens' travels in Central America were published so recently, that I have been unable to use them with advantage; but they have been so extensively read, that this deficiency is of the less moment.

In the second part of this work an attempt is made to solve some interesting problems of ancient aboriginal history. These involve topics of so diversified a character, are so extensive in their bearings, and are predicated upon so many and various proofs, that in many cases it was found incompatible with my proposed limits, to do more than illustrate the several propositions by a portion of the testimonies. Many of them may therefore be considered as brief statements necessary to the chain of argument, and as capable of further proof. As to the conclusions which have been attained no one can be more alive than myself to the fact, that in many cases they are opposed to

the usually received opinions upon these subjects. In relation to the question of origin, no predisposition in favor of the result to which I have arrived, has influenced the investigation; for, biased at the outset strongly towards the theory of a migration by Behring's straits, it was only at a later stage of the examination, and after a long struggle, that I was forced to abandon this idea;—with what reason others must determine. After all, the inquiry, by what route the aborigines reached our shores, is one of minor importance. It is a fact upon which little depends; in view of the extensive diffusion of the Red race over the eastern hemisphere, it cannot be of much consequence, whether they came across the Atlantic, or the southern or northern Pacific. In either case, by other proofs their antiquity is not less certain; the primitive character of their institutions and civilization is not the less demonstrable; and at the most, it could affect only some problems connected with their internal history.

Few can be more sensible than myself of the imperfections of this work, or feel more its defects in point of research. Having had no opportunity of consulting several scarce authorities, I am aware that more light might have been thrown upon many of the points it discusses. My chief consolation has been, that even the humblest contributions to so interesting and noble a theme would be received with kindness. Just criticism, however, is essential to the elucidation of truth, and is to be deprecated least of all upon topics still deeply enveloped in mystery and doubt.

INTRODUCTION.

THE term History, in its usual acceptation, is somewhat restricted in its scope and application. If its extent were strictly limited to authentic narratives and records, such have been the results of time, of accidents, and of barbarian violence, that only a small portion of the human race has preserved any very ancient written memorials; and, with the exception of the historical facts contained in the Sacred Volume, we should be left in ignorance of the most important occurrences of the early ages of the world. Thus of necessity are mankind impelled, in the gratification of a laudable curiosity, to examine other channels by which the events of remote antiquity may have been transmitted, and to study and compare the languages, customs, traditions, science, religion and monuments of nations. It is true, researches of this character do not always afford certain and definite conclusions; but frequently this arises from the method of conducting the argument, or from the insufficiency of the data, and not necessarily from the essential nature of the testimony. And even when sound conclusions cannot be attained, the interest of the subject compensates, in some degree, for the want of success; for these studies lead directly

into the investigation of the greatest problems of human history—the origin, affiliation, and migrations of nations, the progress of society, civilization, knowledge and religion.

And if “the development of the human race is history,” where is that development more clearly exhibited, than in the monuments, and in the civil and religious institutions of mankind? The character of a people is to be read in their architectural productions,—their dwellings unfold their domestic manners, and often the relative condition of different classes in society,—the monuments erected to the memory of the illustrious dead disclose those traits of humanity held in esteem and honor,—the cemeteries tend to exhibit their belief as to a future existence, and the temples and places of worship to denote their religious ideas. Monumental antiquities perpetuate also epochs and occurrences, as well as national characteristics. Truth-telling remnants, which have escaped the shipwreck of time, or rather the organic remains of history, they often indicate those great changes and convulsions which have occurred, as well in the social as in the physical world, and expose in outline the leading events of primeval ages.

Tradition and mythology are no less valuable aids in the elucidation of ancient history. Though, when isolated, of doubtful authority, in combination they cement and perfect an historical fabric, the parts of which, incomplete of themselves, are harmonized and strengthened by union. It is known that the mythological systems of the ancients were but the expression of certain religious ideas, sometimes interwoven with cosmogonical philosophy, or were descriptive of real events transformed into theological fables. In these, and in traditions, whereof some are as old as the deluge, should we search for

the relics of the history of knowledge and civilization, to extricate them from the mass of folly and superstition in which they are enshrouded. The ore lies deep, but not beyond reach ; and though, from the very nature of things, success cannot be immediate, the difficulties to be encountered are such as more extensive research may hereafter overcome.

Nor should the inestimable worth of the results of such inquiries, when successful, be forgotten during the process of investigation. The details, often perhaps dry and wearisome, are still necessary steps in the progress towards a just conclusion, and should be borne with patiently, as a portion of that burden which knowledge always imposes upon those engaged in her pursuit. Their gradual and successive development is just as essential, to the solution of these interesting questions, as were the slow, minute and laborious calculations of mathematicians, to the discovery of the sublime truths of astronomy. Like the base of some ancient column, covered with fallen fragments almost defying the efforts of the explorer to restore it to its former light and glory, primitive history is hidden deep amid the gloom of time and the crumbling ruins of antiquity, to be revealed only by patient inquiry and unwearied zeal.

These remarks are peculiarly applicable to the elucidation of American Aboriginal History, by means of the traditions, monuments and institutions of its native inhabitants. Investigations of this character, always involving subjects of rational curiosity, replete with useful instruction, and of great moral and historical moment, rise in value and dignity when appertaining to the whole aboriginal population of a vast continent, probably untrodden by any other race of human beings, until a period comparatively recent in the annals of the world. And yet they

unfold a page in history possessing no startling dramatic interest, adorned with none of the glare and tinsel of the eccentricities of genius, unemblazoned with the achievements of ambition, and diversified with none of the thrilling incidents of personal adventure ; but they rather appeal to the unbeguiled judgment of the reason by their intrinsic worth, as the only method, in the absence of higher testimony, of obtaining any just deductions, as restoring the lost and broken link of ancient connection between the old and new worlds, and as tending to perfect that chain, by which all mankind are traced to one head and bound together by the ties of a common origin. It is with deep impressions of this nature, that the future exploration of American antiquities should be urged ; for we are as yet but upon the threshold, and though sufficient has already been unveiled for some rational conclusions, the cause of philosophy and knowledge demands a more accurate, thorough and extensive examination of monuments that are fast yielding to the despoiling hand of man and the attacks of time. From the vague and often exaggerated descriptions of some of the early travellers, and from the conduct of the conquerors of the semi-civilized nations of Mexico, Central America, Bogota and Peru, information of incalculable value has been lost to us. It is impossible without the deepest regret and indignation to revert to that period, when ancient pictorial manuscripts were burned, idols, images and planispheres destroyed or buried in the earth, temples levelled with the ground and cities razed—all from the lowest motives of policy, or from the blind zeal of superstition. A frightful chasm has thus been made in the primitive history of this continent, irremediable if we contemplate merely the immense number of Mexican picture-writings that were wick-

edly destroyed. It is possible, however, yet to remedy in a great measure the evil, so far as occasioned by this wanton demolition of architectural and monumental structures, by a careful examination of those which have escaped the violence of the Spanish conquest; and the subject is one eminently worthy of American enterprise.—To embody and collate the descriptions of the most remarkable of the ancient remains and ruins scattered over the continent; to compare the traditions, manners, customs, arts, language, civilization and religion of its aboriginal inhabitants, internally, and with those of other nations; and thence to deduce the origin of the American race and its subsequent migrations,—in a word, to attempt the determination of a portion of its unwritten history, is the object of this work; and if, in any event, it shall serve to stimulate curiosity and inquiry upon this interesting subject, at least one important purpose will have been accomplished.

PART I.

AMERICAN ANTIQUITIES.

CHAPTER I.

INDIAN ANTIQUITIES.

THE ancient remains of art existing in America may be divided into two great classes, differing in style, character and importance. The first class comprehends those of more recent origin, which have manifestly proceeded from an uncivilized people, and which may be traced throughout the whole extent of the continent. They possess the same uniformity of character, that distinguishes the manners and institutions of all the barbarous Indian tribes, and most of them are doubtless of Indian construction. They consist chiefly of ornaments, rude inscriptions, and paintings not unlike the semi-hieroglyphic symbols at present employed by some of the aboriginal nations, and of such implements of warfare and domestic use, as are adapted to the wants of savage life; and yet they exhibit indications of that mechanical talent and dexterity which have been observed as a peculiar trait of nearly all the American natives.*

* *Archæologia Americana*, vol. i. pp. 112, 113, 114.—Brackenridge's Journal, p. 153.

Specimens of aboriginal art and ingenuity are being continually disinterred, in the progress of the cultivation of newly occupied lands, and they vary but slightly from those fabricated by the present tribes, evincing no evidences of a superior state of society. Their proximity to the surface of the earth affords one clue to distinguish them from such as can boast of a higher antiquity, which are usually found some distance beneath the soil. The domestic utensils, flint arrow-heads, stone ornaments, pipes, chisels, knives and tomahawks thus brought to light seldom surpass, in workmanship and design, those of acknowledged Indian manufacture, and of more modern date. An inferior kind of earthenware is of very usual occurrence, but its composition is more rude, and its execution less finished than those of the ancient pottery, while it does not excel such as the Indians have been accustomed to construct.*

There are no indications of any military or architectural structures, exhibiting much art, which can be clearly assigned to the present tribes.† Some fortifications and intrenchments have been ascribed to them, but merely by conjecture; and their dwellings are usually formed of the most fragile materials. The Esquimaux afford, however, an exception in the latter particular; for the remains of their habitations are frequently to be observed in small rude circles of rough stones, and trenched divisions of ground in a circular form.‡ Their method of con-

* Drake's Picture of Cincinnati, p. 200.—Charlevoix's Voyage, vol. ii. p. 93.—"The nations of the south had only vessels of baked earth to dress their meat." Charlevoix, *ibid*.

† Description of Ohio, Louisiana, &c., p. 172.—Pike's Expedition, p. 56.

‡ Back's Narrative, p. 253.—Parry's Second Voyage, p. 15.

structing their huts is also worthy of notice. They are built with blocks of snow, in the shape of a dome, each block being cut with great regularity and art, into the shape requisite to form a substantial arch, and having no support whatever but what this principle supplies.* It may be remarked, also, that the Esquimaux are accustomed to place stones and slabs in an upright position, in every conspicuous spot, some of which have been compared to obelisks. Similar monuments have been observed in other districts of the continent; but they are all unhewn, extremely rude, and bear no inscriptions.†

Many of the tumuli formed of earth, and occasionally of stones, are of Indian origin, and they may generally be distinguished by their inferior dimensions, and isolated situations. They are mostly sepulchral mounds: either the general cemetery of a village or tribe; funeral monuments over the grave of an illustrious chief, or upon a battle-field, commemorating the event and entombing the fallen; or the result of a custom, prevalent among some of the tribes, of collecting at stated intervals the bones of the dead, and interring them in a common repository. A mound of the latter description was formerly situated on the low grounds of the Rivanna river, in Virginia, opposite the site of an old Indian village.‡ It was forty feet in diameter and twelve in height, of a spheroidal form, and surrounded by a trench, whence the earth employed in its erection had been excavated. The circumstances indicating the custom alluded to, were the great number of skeletons, their confused position, their situation in distinct strata exhibiting different

* Parry's Second Voyage, p. 34.

† Back's Narrative, p. 273.—Hodgson's Travels, vol. ii. App. p. 434.

‡ Jefferson's Notes on Virginia, pp. 100, 103.

stages of decomposition, and the appearance of the bones of infants. A mound of similar character, and constructed in layers or strata at successive periods, existed near the south branch of the Shenandoah, in the same state.

There are other tumuli ascribed to the Indians, consisting of stones thrown rudely together, but they are less frequent than those formed of earth. One of these, upon the Blue Ridge, upon being opened was found to contain human bones; and another, in New York, is said to have marked the grave of a distinguished warrior.* The size of all of them is not invariably diminutive, as we are informed that Fort Watson, in South Carolina, was built upon the summit of one upwards of thirty feet in height;† and, according to an authentic report, a mound of the largest dimensions has been thrown up within a few years, in Illinois, over the remains of an eminent chief.‡

So materially have the customs and institutions of the Indians been changed since the discovery, that most of these tumuli are of considerable age, and it has even been doubted, whether they were constructed by the immediate ancestors of the present Indians; but it appears, from a very respectable authority, that many tribes still continue to this day to raise a tumulus over the grave, the magnitude of which is proportioned to the rank and celebrity of the deceased.§ We find these mounds scattered at intervals over the surface of both Americas, from the country of

* Macauley's History of New York, vol. ii. p. 239.

† Ramsay's History of the United States, vol. ii. p. 34.

‡ Beck's Gazetteer, p. 308.

§ James, vol. ii. p. 1.—Description of the Red River, p. 152.—Brackenridge's View of Louisiana, p. 137.

the Esquimaux to that of the Fuegians;* and though neither by their size nor their contents, do they impress us with a high opinion of the civilization of their authors, still they shed some light upon their ancient history. If the Indians are the branches and descendants of a more civilized people, and have retrograded from a higher condition of society—an opinion supported by many curious facts—we may expect to find the greatest differences between them, and their more civilized ancestors, in such circumstances as are always affected by a change in mode of life; and to discover the strongest signs of affinity, if any, in religious belief, and in such customs as are arbitrary, and not the spontaneous and natural growth of a particular state of society. Accordingly we can trace a few such resemblances in their productions of art, and in their domestic manners; but the moment we contemplate their religion, and, above all, their method of disposing of the dead and their sepulchral monuments, a great and striking uniformity is exhibited. Reverence for the dead, though it be a feeling common to all mankind, and natural to the human heart, is a most marked and distinguishing trait in the character of the members of the Red race—not however as a sentiment, but as a religious and mystic feeling, springing less from the kindly affections of the soul, than from a superstitious impression, deeply imprinted in the very elements of their character. Even among such barbarous native tribes, as possess the lowest estimate of social virtues and duties, and as are characterized by the most savage indifference and selfishness in all the near and tender relations of life, the moment the spirit has left the body, a new chord seems to be struck in the hearts of

* Parry's Voyages.—Silliman.

the survivors, and those, who were neglected and perhaps hated when living, are venerated in death ; and thus monuments have been reared over the bones of the departed, which, when alive and in the full tide of successful power and commanding influence, they could not have extorted as tributes of respect or obedience. Amid the barren waste of Indian apathy, here is a green spot whereon to rest the eye—a singular exception to that impenetrable, obdurate stoicism, possessed by them, in common with the more cultivated nations of the same race. Herein we perceive the reason, why the tumuli are the only monuments of the Indians ; for with this religious feeling, as transmitted to them from their forefathers, they have also preserved the custom of erecting sepulchral mounds. In this view, these rude monuments are of important consideration ; for, appearing alike, among the remains of art, and in the seats of the ancient civilized nations, and in remote regions whither civilization never penetrated, they develope one of the arguments tending to establish the common origin of all the American aborigines, whether barbarous or cultivated.

CHAPTER II.

ANCIENT REMAINS IN THE UNITED STATES.

THE next, and perhaps the only legitimate class of American antiquities, affords unquestionable proofs of an origin from nations of great cultivation. Though all of them are assimilated by many striking general resemblances, still their local position and some characteristic differences suggest a ternary division, into such as have been discovered, 1st, within the territory of the United States; 2d, in Central America, Mexico and the adjoining provinces; and 3d, in Peru and other parts of South America.

1. The ancient remains of the United States bear evident marks of being the production of a people, elevated far above the savage state. Many of them indicate great elegance of taste, and a high degree of dexterous workmanship and mechanical skill, in their construction; others betoken the existence of a decided form of religious worship; while the size and extent of the earthen fortifications and mounds demonstrate the former existence of populous nations, capable of executing works of enormous dimensions, requiring perseverance, time and combination of labor for their erection.

A detail of these vestiges of that vast population, which once occupied the richest agricultural portion of our country, though minute and circumstantial, cannot be devoid of interest; and in

any event these relics demand attention, as the monuments of an ancient and perhaps enlightened species of the human race, whence, in the absence of clearer testimony, we must endeavor to gather materials for their history.

The first class of these antiquities is composed of articles of mechanical workmanship, which have most frequently been discovered within the graves, mounds, and mural remains; and of other objects, of a miscellaneous character. The art of pottery is one of very early invention, as fragments of earthenware are found among the oldest ruins of the world. Its productions, though fragile, have withstood the effects of time more durably than the most massive structures, and specimens still exist entire, coeval in date with the remotest periods of civilization. Those found in the United States, of ancient construction, are of different qualities and dimensions—some, by estimate from fragments, having been of large capacity.* The chalk banks below the mouth of the Ohio river have contained several of great merit in execution, and a pitcher, which has been discovered there, is said to resemble the Scyphus of the ancients.† Its model was the bottle-gourd; the neck is moulded in imitation of that of a woman with clubbed hair; the outlet resembles a distorted human mouth; and the whole vessel, though formed by the hand, is modelled with great nicety and precision.‡

An earthen vessel found at Nashville, Tennessee, twenty feet below the surface, is described as being circular, with a flat bottom rounding upwards, and terminating at the summit in the figure of a female head. The features of the face are

* Flint's Recollections, p. 166.

† Ibid, pp. 173, 174.

‡ Archæologia Americana, vol. i. p. 214.

Asiatic, the head is covered by a conical cap, and the ears are large, extending as low as the chin. The most curious specimen of pottery is that denominated the *Triune*-vessel, which was disinterred from the earth, near an ancient work upon the Cumberland river.* It consists of three heads, joined together at the back, near the top, by a hollow stem or bottle. The heads are of the same dimensions, and represent very accurately three different countenances, two appearing young and the other old. The faces are partly painted, with red and yellow, the colors still preserving great brilliancy. The features are distinguished by thick lips, high cheek-bones, the absence of a beard, and the pointed shape of the head. An idol† discovered in a tumulus at Nashville presents the figure of a man without arms, and the nose and chin mutilated. The head is covered with a fillet and cake, and the hair is plaited :—The composition is of fine clay mixed with gypsum. Colored medals‡ representing the sun with its rays, other idols of various forms, and urns containing calcined human bones, some modelled after the most elegant and graceful patterns, have been found in the mounds. The fragments of earthenware, discovered at great depths near the western salt-works, are often of immense size. A large vessel, of coarse description, has been found there, eighty feet below the surface, of capacity to hold ten gallons ; while others have been excavated at greater depths, and of larger dimensions. Within a mound lately opened at Lancaster, in Ohio, upon a furnace disposed at the level of the earth, there rested the largest ancient vessel yet discovered. It was eighteen feet long, six

* *Archæologia Americana*, vol. i. p. 238.

† *Ibid.* vol. i. p. 211.

‡ *Ibid.* vol. i. p. 243.

broad, composed of clay and broken shells, and moulded on both sides with much smoothness.*

These articles of pottery vary much in their structure. The material is either simply clay—that substance united with pulverized sandstone or calcareous matter—or a composition, as well calculated, as our chemical vessels, to encounter a high degree of heat, and formed upon scientific principles.† Some of them appear to have been painted before burning, are skillfully wrought and polished, well glazed and burned, and are inferior to our own manufactures in no respect. There exist other specimens, of ancient origin, corroborating this view of the chemical knowledge of their authors. At Hamburg, in the state of New York, within an urn in the interior of a mound, curious beads have been found deposited, consisting of transparent green glass, covered with an opaque red enamel, beneath which and in the tube of the bead was a beautiful white enamel, indicative of great art in its formation.‡ On opening an old grave at Big River, in the state of Missouri, whose antiquity was sufficiently attested by a heavy growth of forest trees over the spot, beads of similar shape, appearance and composition have also been brought to light.§

The bricks discovered in the mounds appear to have been formed after the modern method, and are well burnt; those found in the ancient fortifications are of similar construction and appearance, with the exception of possessing a lighter color.

* Trans. Fairfield Co. Med. Soc.

† Schoolcraft's Mississippi, p. 202.

‡ Schoolcraft's View of the Mines and Minerals of the West, &c. p. 280.

§ Ibid. pp. 169, 283.—Beck's Gazetteer, p. 261.

The art of working in stone, and other hard substances, was carried to a considerable degree of perfection by this people; and beads of bone and shell, carved bones, and hewn and sculptured stones are by no means rare. Their weapons and implements were often formed from the oldest and hardest of rocks; and arrow-heads, axes and hatchets of granite, and horn-blende, nicely cut and polished, are of frequent occurrence. The covers of some of the urns are composed of calcareous breccia, skilfully wrought;* the pieces of stone worn as ornaments, and found interred with the dead, have been drilled and worked into precise shapes, and the pipe-bowls are adorned with beautifully carved reliefs.† An idol of stone, representing the human features, has been found at Natchez, the sculptured head and beak of a rapacious bird in a mound at Cincinnati, and an owl carved in stone at Columbus, Ohio. The most singular of these sculptures has been discovered on the banks of the Mississippi, near St. Louis. This is a tabular mass of limestone bearing the impression of two human feet. The rock is a compact limestone of grayish-blue color, containing the encrinite, echinite, and other fossils. The feet are quite flattened, but the muscular marks are delineated with great precision. Immediately before the feet lies a scroll, sculptured in a similar style.‡

The opinion sometimes entertained, that these are actual impressions of the human feet, made upon a soft substance subsequently indurated, is incorrect; on the contrary, they are undoubtedly the result of art, and exhibit an extraordi-

* *Archæologia Americana*, vol. i. p. 227.

† *Ibid.* vol. i. p. 230.

‡ Schoolcraft.

nary analogy with similar appearances in Asia and in Central America.*

Ancient inscriptions upon rocks have also been observed. Dr. Barton examined some, on a large stratum of rock upon the east shore of the Ohio, about fifty miles below Pittsburg, and found them in great numbers, and apparently "the work of a people acquainted with the use of iron instruments, or with hardened metallic instruments of some kind."†

Upon one of the branches of the Tennessee river are perpendicular rocks, on which, more than one hundred feet above the present high-water mark, are representations of beasts, birds, and other figures.‡

Near the confluence of the Elk and Kenhawa rivers, in the western part of Virginia, Bishop Madison observed some remarkable remains of sculpture. Upon the surface of a rock of freestone lying on the margin of the river, about twelve feet in length and nine in breadth, he saw the outlines of several figures, cut without relief, except in one instance, and somewhat larger than the life. The depth of the outline was about half an inch, and its width three quarters, nearly, in some places. "In one line, ascending from the part of the rock nearest the river, there is a tortoise; a spread eagle executed with great expression, particularly the head, to which is given a shallow relief; and a child, the outline of which is very well drawn. In a parallel line there are other figures, but among them that of a woman only can be traced: these are very indistinct. Upon the side

* It is asserted that similar sculptures have been found elsewhere in Missouri.—*N. Am. Review*.

† *Trans. Am. Phil. Soc.* vol. iv. p. 195.

‡ *Ib.* vol. iii. p. 219.

of the rock there are two awkward figures which particularly caught my attention. One is that of a man, with his arms uplifted and hands spread out, as if engaged in prayer. His head is made to terminate in a point, or rather he has the appearance of something upon the head of a triangular or conical form: near to him is another singular figure, suspended by a cord fastened to his heels." "A turkey, badly executed, with a few other figures, may also be seen. The labor and the perseverance requisite to cut those rude figures in a rock, so hard that steel appeared to make but little impression upon it, must have been great, much more so than making of enclosures in a loose and fertile soil."*

Many metallic remains have also been discovered among the ancient ruins, some quite perfect, and others in a state of decomposition. Copper appears to have been in the most general use. It has been found in the mounds, either in irregular masses or worked into various forms, and sometimes plated with silver. Arrow-heads, bracelets, circular plates or medals, beads, a cross, and pipe-bowls, all composed of this metal, have been disinterred from the tumuli.†

One of the ancient mounds at Marietta, Ohio, was situated on the margin of a stream, which had gradually washed away the surrounding soil and part of the structure itself, when a silver cup was observed in the side of the mound. Its form was extremely simple, and resembled some of the earthenware patterns, being an inverted cone. It consisted of solid silver, its surfaces were smooth and regular, and its interior was finely gilded.‡

* Trans. Am. Phil. Soc. vol. vi. pp. 141, 142.

† Arch. Am. vol. i. p. 224.

‡ Schoolcraft's View, p. 276.

In Salem, Washington county, Ohio, it is said that ancient marks of tools have been observed upon pieces of rock, and that in one mass of stone an iron wedge has been discovered, firmly imbedded.* Except from this instance, and the occasional presence of pieces of oxidized iron in the mounds, we have no evidence showing directly whether this valuable metal was in use. In Liberty, Washington county, Ohio, are the ruins of several stone furnaces, constructed with hearths of clay, and containing pieces of mineral coal and cinders.† It has been thought that the purpose of these works was explained by their locality in a rich iron region; but this is the only reason for conjecturing they were used in the manufacture of iron, and one manifestly of slight weight. The wedge of iron found at Salem, in the same county, was probably not of ancient origin; at least, it needs very accurate and close examination before so important a fact can be admitted. Candor seems to demand, notwithstanding the exertions made to establish the use of iron among the authors of the mounds and fortifications, that the supposition is supported by no positive testimony, and by little that is even reasonably conjectural; while at the same time we should be careful, in deciding so interesting a question, to bear in mind that the perishable nature of this metal, when exposed to the atmosphere or moisture, would probably have destroyed all vestiges of its use at the distant period when the mounds were erected.

Circumstances favor the idea, that the authors of the western antiquities were in the habit of working many of the salt springs, for the manufacture of that article.‡ At the state salt-works in

* Delafield's Topographical Description, p. 28.

† *Ib.* p. 28.

‡ Van Rensselaer's Essay.

Illinois occurs a large excavation, four hundred feet in circumference, in which a deep well has formerly been sunk. In digging at this place, ashes, and fragments of pottery were discovered in great abundance; and a drain has been found, so connected with the works, as to justify the inference of its being intended to carry away the surplus water. The earthenware found here is at vast depths below the surface, and it resembles in composition the specimens occurring in the ancient mounds. At Harrisonville, in St. Clair county, and near the Ohio saline, the presence of broken pottery and other appearances authorize similar conclusions; particularly the shape of the vessels, which may very well have served as evaporators.*

The antiquities discovered in the western caves are of a remarkable character, and have excited much speculation. They cannot be ascribed to the present tribes of Indians, in consequence of the very general reverence in which caverns are held by them. They view them with deeply superstitious feelings, esteeming them as the residence of the Great Spirit, and never appearing there for any other purpose, than for the occasional celebration of solemn, religious festivals.† In the saltpetre caves of Gasconade county, Missouri, axes, hammers and other implements have been found, which are probably of identical origin with some ancient works in the vicinity. Below the falls of St. Anthony is another cavern, distinguished for its great length, and called, in the Indian language, "The dwelling of the Great Spirit." The walls are composed of a soft stone, easily yielding to the knife, and they contain many hie-

* Beck's Gazetteer, pp. 68, 118.

† *Ib.* pp. 43, 98, 234.—Carver's *Travel's*, p. 48.

roglyphical figures, so covered with moss and defaced by time, as to be traced with great difficulty.*

Within the saltpetre cave in Warren county, Tennessee, two bodies have been discovered, interred in a sitting posture in baskets made of cane, the hip joints dislocated, and the legs brought up close to the body. One of them was a male and the other a female. Great care had manifestly been taken to secure them a durable preservation, and at the period of discovery the flesh, teeth, hair and nails were still entire. They were enveloped in dressed deer-skins, and in a species of cloth, of firm texture, woven from the fibres of the nettle, or from bark, and overlaid with the most brilliant feathers of various hues, symmetrically arranged; another covering, of undressed deer-skin, succeeded, and the exterior wrapper was cloth of the same kind, but unornamented. The female had a fan in her hand, composed of turkey feathers so disposed, that it might be opened and closed.†

Human bodies have been discovered near the Cumberland river, in the same state; in the nitrous caves near Glasgow, and in the Mammoth Cave, in Kentucky; all placed in the same sitting position, clothed in skins and cloths of various textures, inlaid with feathers—the bodies remaining in a high state of preservation, and the hair generally of a color varying from brown to yellow and red.‡ This last peculiarity has given rise to many fanciful conjectures concerning the race to which

* Carver's Travels, p. 48.

† Hayward's Tennessee, vol. ii. p. 163.—Flint's Recollections, p. 173.—Archæologia Americana, vol. i. p. 303.

‡ Medical Repository, vol. xv. p. 187.

the skeletons may be ascribed.* Within the same caves many other miscellaneous articles have been found, far below the surface,—such as bows and arrows, earthenware, fishing nets, cloths, mats, cane baskets, beads, wooden cups, moccasins of bark, various utensils and relics indicative of the character of the deceased with whom they were buried; and, more singular still, the bones of the peccari or Mexican hog, an animal not indigenous to the United States, but belonging to the more southern climates. In general, these caves have been great cemeteries of the dead, for bodies are being continually disinterred from the earth within them, and more than a hundred human skulls have been counted in one cave, within a space of twenty feet square.†

With regard to the color of the hair observed upon these bodies, it has been unreasonably considered, as sustaining the theory of the European origin of the ancient inhabitants of the west. The probabilities are, however, that its original hue was black, and that the change to its present appearance is owing to the chemical action of the saltpetrous earth in which the bodies were deposited.‡ In corroboration of this view, some human remains found in Peruvian sepulchres may be referred to: several of these tombs examined in 1790, by the Spaniards, contained bodies in an entire condition, but withered and dried, and the hair of a red color. From their position and other accompanying circumstances, they were undoubtedly the re-

* *Archæologia Americana*, vol. i. p. 304.

† *Silliman's Journal*, vol. i. p. 622.

‡ A similar phenomenon has sometimes been observed in the appearance of the Egyptian mummies, the hair having been changed in color, from black to red.—*Wilkinson's Egypt*, p. 370.

mains of the Peruvian Indians, the change in the hair having probably arisen from the character of the soil, it being strongly impregnated with saline matter.*

The graves of the ancient inhabitants appear usually in the vicinity of the earthen remains and mounds, and when they are not within tumuli, frequently consist of a rude species of stone coffin, in which the deceased has been interred in a sitting posture. Such are the graves in Missouri, upon the Merrimack river, concerning which so much speculation has been indulged.† They were a short distance from several mounds, and a ruined earthen rampart. The coffins were formed of six pieces of flat stone, were from twenty-three to fifty inches in length, and situated upon small hillocks. The skeletons were mostly decayed, or in such fragments as to render it somewhat difficult to ascertain their size and position. In one instance, however, the leg bones were found lying parallel with the thigh, a circumstance explaining the diminutive size of the graves. Similar graves have been opened and examined, in Tennessee, and in other parts of the western country,‡ all indicating that the body has not been disposed lengthwise, but placed with the legs drawn together close to the body, so as to occupy a very small compass. Nothing further need be said in relation to the idea of the Lilliputian stature of the ancient inhabitants. Other tombs have disclosed bones, which, from their size, have suggested the belief in a former race of giants—an opinion equally unfounded with the one just referred to, which it so strongly contradicts.§

Numerous other articles have been discovered in the prose-

* MS. Travels.

† Beck's Gazetteer, p. 274.

‡ Scientific Tracts, vol. iii. p. 157. § Beck's Gazetteer, p. 261.

cution of antiquarian researches in the regions of the west, but they afford no additional light concerning the state of the arts, or the customs, of those extinct nations from whom they have proceeded.

CHAPTER III.

ANCIENT REMAINS IN THE UNITED STATES.

THE second class of Antiquities in the United States, proceeding from the same ancient people, exhibits, in an extended view, decisive proof of the immense numbers and advanced social condition of their authors. It comprehends the Mural Remains, or enclosures—formed by earthen embankments and trenches; which appear most numerous in the district bordering upon the Mississippi and its branches, and in the vicinity of the great lakes and their tributaries; though they may be found stretching at intervals from New-York to Florida, and from the Territory west of the Mississippi to the Alleghanies. A detail of some of the most remarkable ruins of this character, though exposed to a charge of tediousness, is highly important in developing a just and correct idea of the power and population of the former inhabitants of our country.

The first work of this description meriting attention in the state of New-York, is one formerly existing on the Genessee river, which enclosed an area of about six acres. It was surrounded on three sides by a ditch running in a circular direction, which was intersected by six entrances; on the other quarter a high bank formed a natural defence, through which a covered way led down to a neighboring stream. At a short distance to the south were similar works defended by a deeper fosse, and

disposed upon a more eminent and inaccessible situation, combining artificial with natural advantages.*

On the river Tonawandé there was a place distinguished in the Seneca tongue by a word signifying "the double fortified town," or "a town with a fort at each end." These forts were separated by an interval of two miles; the one containing about four, and the other eight acres of land. The ditch encompassing a part of the former was six feet deep,—a stream and a high bank, bisected by a covered way to the water, defending the remaining portion. The northern fortification was on elevated ground, and in proximity to it was a sepulchral mound, six feet in height, twenty-five feet in diameter, and containing bones, which appeared projecting in many places from its surface. The remains of another fortified town, containing more than *five hundred acres*, formerly existed in Pompey, Onondaga county: three circular or elliptical forts, disposed in a triangle, and distant from each other about eight miles, were its out-works.† At Camillus, in the same county, there were a few years since two elliptical forts, with gates, and with covered ways to the adjacent water. Another formerly stood upon the Seneca river, which was in the form of a parallelogram, two hundred and twenty yards in length, and fifty-five in breadth, with gates opening on either side, towards the river, and to the country. In its vicinity was a mound or elevation in the shape of a crescent, with its extremities turned towards the fort.‡ At least a hundred of these fortifications have been perceived in this state, stretching from the Delaware, through the region

* Kirkland's MSS., cited in Yates and Moulton's Hist. of New-York, vol. i. p. 16.

† Clinton's Memoir.

‡ New-York Magazine, 1792.

occupied by the small lakes, to the ancient shores of lakes Ontario and Erie. They are mostly of regular forms,—oblong, circular, triangular, or elliptical,—generally overgrown with large forest trees, and placed near streams or other bodies of water. With one doubtful exception, none have been found between the ancient beaches of Lakes Erie and Ontario and their present shores, though many of them run parallel with the former line of the lakes,—a circumstance favoring the idea of their high antiquity.* On the south side of lake Erie there is a series of these fortifications or enclosures extending, at intervals of a few miles, as far as the Pennsylvania boundary line; nor do they terminate there, but in that state also they occur in great numbers, to the westward of the Alleghany ridge, and are of a similar character with those just described, possessing no marks of peculiar difference.†

In the western part of Virginia, these traces of the ancients may also be observed, particularly in that region which borders on the tributaries of the Ohio, and upon the low grounds of the Elk, Guyandot and Kenhawa rivers.‡ Near Wheeling there are appearances of fortifications or enclosures, commencing in the vicinity of the mounds upon Grave creek, and continuing at intermediate distances for ten or twelve miles along the banks of the Ohio.§ They consist of square and circular entrenchments communicating with each other, of ditches, walls and mounds, and a broad causeway leading from the largest enclosure towards the neighboring hills.||

* Clinton's Memoir on the Antiquities of the Western part of New-York.

† Arch. Amer., vol. i. p. 309.

‡ Trans. Am. Phil. Soc., vol. vi. p. 134. § Ibid. vol. iii. p. 215.

|| Silliman's Journal, vol. vi. p. 166.

Passing further to the south and into the state of Georgia, upon the banks of Little river, a branch of the Savannah, not far from the town of Wrightsborough, "many very magnificent monuments of the power and industry of the ancient inhabitants" have been remarked by an intelligent traveller.* They consist of a stupendous conical pyramid, vast tetragon terraces, and a large sunken or excavated area of a cubical form, encompassed with banks of earth, and also traces of an extensive town.

Upon the east bank of the Ocmulgee river, eighty miles above its confluence with the Oconee, upon the heights of the low grounds, are vestiges of an ancient town, such as artificial mounts or terraces, squares, and embankments encircling considerable areas.

On the west bank of the Altamaha, nearly opposite to Darien,† are the remains of an ancient earthen structure. It is a regular tetragon terrace four feet high, with bastions at each angle, and surrounded with a ditch enclosing about an acre of ground.

On the Savannah river, just above Petersburg, upon a level plain near the bank of the river, are other ruins, consisting of several mounds and four square terraces.‡ The largest mound is conical, fifty feet high, eight hundred feet in circumference at the base, and its summit is truncated. A spiral path leads to the top, and there are four niches excavated out of the sides, at different heights, and fronting the cardinal points. Several mounds of inferior dimensions are disposed around it, and also

* Bartram's Travels, p. 37.

† Ibid. p. 52.

‡ Ibid. p. 323.

some terraces, three hundred feet square and from six to ten feet high.*

On the Chattahooche, upon a peninsula formed by the doubling of the river, there are mounds and enormous quadrangular terraces; in front of one of the latter is an extensive square enclosure surrounded with an earthen wall.†

Upon the Etowah river is an excavation which sweeps in a large section of land, by bending towards the water in the form of a semi-circle; there are no embankments, and the entrances to the interior are made by interruptions of the excavated ditch, at certain regular intervals.‡

Many other groups of similar ruins occur in this state and in Alabama, and they seem to present a continuation of those existing in Florida, connecting them, in a northerly course, with the ancient remains in Tennessee and Ohio.§

Florida abounds in these relics of antiquity. Near Lake George formerly stood a large mound; and in its vicinity were fields appearing to have been anciently cultivated, and also oak, palm, and orange groves. From this mound, two parallel walls, fifty yards asunder, led in a straight line to the verge of an oblong artificial lake distant three quarters of a mile.||

Upon one of the islands of Lake George, are the remains of

* Bartram's Travels, p. 31.

† Ibid. p. 388.

‡ Silliman's Journal, vol. i. p. 322.

§ "I was informed, by a gentleman in Tennessee, of the existence of a *singular and antique stone fort* on the summit of a mountain, in Franklin county, Alabama, near Little Bear Creek, a tributary of Tennessee river—but have never read any notice of it."—*Latrobe's Ramb. in N. Amer.*, vol. ii. p. 179.

|| Bartram's Travels, p. 97.

a large town and a pyramidal mound, from which there proceeds in a straight line to a large, green, level savanna, a highway, formed of parallel walls resembling those just described; fragments of earthenware, bones, and other remains abound in the neighborhood.* Near New Smyrna similar remains have been observed;† and monuments of the same character, often connected with artificial ponds or lakes, are to be perceived from the river St. John to the southern coast of Florida,‡ in great numbers and of various dimensions,—exhibiting, by their frequency and extent, all the signs of having been constructed by a populous nation.

Having thus rapidly traversed the eastern boundary line of these earthen structures, upon turning to the west we find them in greater numbers, and of a more extraordinary character. Near Salem, Ashtabula county, Ohio, about three miles from Lake Erie, upon the Coneaught river, is an enclosure situated upon a hill, and surrounded with two concentric circular walls, a ditch intervening between them.§ There is but one gateway, and from this a road leads to the water; within the walls, earthenware and skeletons were found, and the whole place is covered with a thick growth of trees.

At Marietta, within the city limits, some years since, there were two large, oblong enclosures, and a conical mound; the largest of the enclosures contained forty, and the other twenty acres of ground.|| They were encompassed by ramparts of earth, from six to ten feet high, and thirty feet in breadth at the base, and on each side were three gateways, at equal

* Bartram's Travels, p. 101.

† Ibid. p. 142.

‡ Ibid. p. 519.

§ Arch. Amer. vol. i. p. 124.

|| Description of the Ohio River.—Harris's Tour, p. 149.

distances apart. A sort of covert way, formed of two parallel walls, two hundred and thirty-one feet apart, defended the approach to the Muskingum; the walls were forty-two feet wide at the base, twenty-one feet high within, and five feet high on the outer sides. A line of smaller parallel walls leads down to the water from the corner of the fortification. Within the area enclosed, at the north-west corner, was an oblong terrace, nine feet high; at the middle of each of its sides the earth was projected, forming gradual ascents to the top, ten feet in width. Near the south wall was another terrace, nearly similar; at the south-east corner was another; about the middle was a circular elevation; and at the south-west corner was a semicircular parapet, covered with a mound, which guarded the gateway or entrance in that quarter.

The other enclosure had a gateway in the middle of each side, and at the corners was defended by circular mounds. A short distance from its south-east side was a conical mound, one hundred and fifteen feet in diameter, thirty feet high, and surrounded by a ditch and embankment, through which there was a gateway opening towards the fortification. The mound was protected in addition by outworks, and parapets, and other mounds. There were also found here excavations,—originally of great size and depth,—still perceptible; which were probably wells, and supplied the inhabitants with water. Upon a branch of the same river, ninety miles from Marietta, a series of works, consisting of entrenchments and mounds, extended about two miles in length, and the ramparts and mounds were of much greater height than those at Marietta.*

Near Newark, in Licking county, another extensive succes-

* Description of the Ohio River, p. 19.—Colum. Mag., May, 1787.

sion of fortifications existed. Commencing upon the westerly side, there was a round fort containing twenty-two acres, on one side of which stood an elevated observatory, constructed partly of earth, and partly of stone, beneath which there appears to have been a secret passage-way to a neighboring stream upon the opposite side. This circular fort was connected, by two parallel walls of earth, with an octagonal fort containing forty acres. The walls of the latter were ten feet high, and were cut by eight gateways, each of which was defended by a small mound of earth, or curtain, on the inside. Thence, on the one hand, parallel walls proceeded to the water; on the other, towards the interior of the country, to the distance of several miles; and in the middle, others ranged easterly, connecting the works just described with the following:—A square fort containing twenty acres, connected towards the south, by parallel walls, with a circular fort of twenty-six acres, encompassed by an embankment from twenty-five to thirty feet high; and towards the north, by two covered ways, with the neighboring stream. At the extremity of these covered ways, the former margin of the stream was defended for some distance by a wall, flanked at each end by elevated mounds of earth; upon an elevated plateau to the north-east, protected likewise by an entrenchment, stood several tumuli, containing the remains of the dead. From a careful examination of the adjacent country, and the occurrence of similar walls at various intervals, it has been supposed these works were connected with others at Hockhocking river; thus forming one continuous line of defence, and preserving an open communication.

At Circleville, Ohio, there were two earthen enclosures, one *an exact circle*, and the other a *precise square*, with its sides facing

the cardinal points, under no greater variation than that of the needle.* The square enclosure had eight entrances, equidistant, and all defended by circular mounds within; each side was fifty-nine rods in length, and the wall ten feet high. Upon its west side it was immediately connected with the circular enclosure, which was sixty-nine rods in diameter, and encompassed by double walls, twenty feet high, with a ditch intervening between them. In the centre of this circle was a mound, with a curious semicircular pavement on its eastern side; and a short distance without the walls stood another mound, ninety feet high.

In Warren county, on the banks of the Little Miami river, and between two of its branches, we find the summit of an elevated plain defended by walls, from ten to twenty feet in height; their course is irregular, and generally corresponds with the marginal line of the hill.† Upon the side facing the Miami, three terraces are cut out of the bank, and command the passage of the river. On the north-easterly side are two mounds, connected by broad parallel roads, or embankments, with a third standing at the distance of a quarter of a mile, around which the roads make a detour, and then meet. These works are constructed of earth, and have fifty-eight openings, or gateways.

At Paint Creek, a short distance from Chillicothe, in the same state, were two series of ruins, on opposite sides of the stream.‡ That on the north side was protected by a square and by a circular fort, and contained seventy-seven acres. Both without and within this area were several mounds, and also four large wells,

* Arch. Amer., vol. i. p. 141.

† Ibid. vol. i. p. 156.

‡ Ibid. vol. i. p. 145.

which still retain water. Among the mounds in the interior were two elliptical elevations, one twenty-five feet high, three hundred and thirty feet long, and one hundred and seventy feet broad, constructed of stones, and containing human bones; and the other was from eight to fifteen feet high, and was formed with two stages or terraces; the summits of both were level. Another work, in the form of a half-moon, was set round the edges with stones; while near it stood a singular mound, five feet high and thirty in diameter, formed entirely of red ochre.

The enclosure on the south side of the stream was also irregular; contained two mounds, one of them twenty feet high; and was defended by a square fort, precisely of the same dimensions with that above described.

To the east of both these fortifications, upon a rocky, precipitous hill, a wall of unhewn stone, enclosing one hundred and thirty acres, has been thrown up around the edge of the summit, with two gateways, one opening directly towards the river. An immense quantity of cinders was found in the interior of this enclosure. In the bed of the creek, just below the hill, are four wells, dug through the rock, and laid round at the top with hewn stone. Their apertures were closed with circular slabs, having a small hole through the centre, and apparently wrought with tools; the stream, it is thought, has changed its channel since their excavation.

On the north fork of Paint Creek are other works, which consist of two enclosures connected with each other. The area of the largest is one hundred and ten acres, surrounded by a ditch, and a wall twelve feet high, and disposed in an oblong form. The smaller work, on the east side, is nearly square,

and contains sixteen acres. Within the large enclosure are two circular works, encompassed with embankments, one of which contains six sepulchral mounds, or cemeteries.*

Appearances of works similar to those of Paint Creek were, at the close of the last century, visible for nearly sixty miles along the Scioto, to its junction with the Ohio; opposite which, on the Virginia side, were extensive ruins, and among them the remains of chimneys.†

In the neighborhood of Portsmouth, on the south side of the Ohio river, there was a square enclosure, with parallel walls diverging from it on either side towards the river, enclosing a fine interval of land; at its south-west corner stood a large mound, covering one quarter of an acre, and twenty feet in height.‡

On the north side of the river there were remains of a more intricate character. They consisted chiefly of parallel walls running from the water, the distance of four miles, to the summit of a large hill, where, after a detour, they terminated near four mounds. Three of these mounds were six feet in height, and covered nearly an acre each, and the fourth had an elevation of twenty feet. In the vicinity were an unfinished tumulus, and another completed, twenty-five feet high, and containing the remains of the dead. At the brow of the hill was a well, still twenty-five feet deep, and also two others each ten feet deep. From the east side of this group of mounds, proceeded parallel walls, two miles towards the river, sweeping in a large circuit of the richest land.

* Ar. Am., vol. i. p. 151. † Tr. Am. Phil. Soc., vol. iii. p. 216.

‡ Ibid. vol. i. p. 183.

Near Somerset, in Perry county, Ohio, was an ancient ruin, whose walls, enclosing an area of forty acres, were built with rude masses of unhewn stone, at present lying in confusion, and but a few feet in height.* One gateway, between two large rocks, opened into the country, before which was an enormous boulder of rock in some degree defending the access. In the line of the wall stood a small stone mound, and towards the middle of the enclosure was another, composed of the same materials, of a conical shape and much larger dimensions. These works were placed upon elevated ground, and, in consequence of their distance from water, are presumed to have been intended for other purposes than habitation.

The state of Kentucky contains many of these ruins. There was one near Lexington which has been mistaken for an Indian structure.† Its form was an irregular oval, about fourteen hundred yards in circumference, surrounded by an earthen embankment, from eight to ten feet thick at the base and from five to ten feet high, broken by apertures or gates at irregular intervals. Near the middle of the enclosure was a small mound, about two or three feet in height, and also a number of pits or depressions, resembling sunken graves. The whole work, inclusive of the ramparts, was overgrown with a forest of trees of a large size, and of the growth and kind usual in the vicinity.

On the Mississippi, a few miles below lake Pepin, upon a broad plain, the appearance of entrenchments has been observed, forming a breastwork about four feet high. Their form was

* Arch. Amer., vol. i. p. 147.

† Trans. Amer. Phil. Soc. N. S., vol. i. pp. 310, 312.

semicircular, the ends reaching to the water, and the whole line extending about a mile.*

In the town of Jefferson, west from Milwaulkee, on the west branch of Rock river, are the ruins of an extensive walled city, with a number of mounds or tumuli in the immediate vicinity. The form of that part examined is oblong, and its area is surrounded with the dilapidated remains of a brick wall, one quarter of a mile in extent, and now crumbled to the earth. The brick appears to be like that made at the present day with the exception of its possessing a lighter color, and the wall is covered with vegetable matter, and completely overgrown with verdure. Its remains are now twenty-three feet wide at the base, and four or five high, the wall having originally been much higher and narrower, but being now spread out by decay; the vestiges of buttresses projecting, at regular intervals, seventeen feet beyond its line, are still perceptible. At the north-west and south-west corners of the enclosure, upon the exterior, are two semicircular groups of mounds, their respective heights varying from three to twenty-five feet; at the same corners, on the inner side of the enclosure, are two square elevated plains or terraces, fifteen feet high, one of them accessible by a stairway. Upon the eastern side, towards the margin of the river, two other terraces appear; and about the middle of the eastern wall, at the water's edge, is the termination of a sewer, three feet below the surface, and arched with stone. An elevated ridge of earth connecting two of the terraces, parallel walls running north and south through the interior of the fort, and the remains of a cellar,

* Carver's Travels, p. 45.—Pike's Expedition, p. 18.

complete the description of these interesting ruins so far as they have yet been examined.*

In the state of Illinois, three miles above the Vermillion river, upon an elevated cliff on the left bank of the Illinois river, is Rock fort. The summit of the hill is level, contains about three quarters of an acre, and is covered with soil and young trees. Here is a regular entrenchment, corresponding in its course with the edge of the precipice; and within this are other excavations, covered with trees. Upon this spot have been found broken muscle shells, fragments of antique pottery, and stones which have been subjected to the action of heat, resembling lava.† Between this place and Mount Joliet, are the ancient sites of several old villages; one, on the top of Buffalo rock, and another, in a plain, have been completely encompassed by a ditch and wall, the remains of which are still conspicuous, and the extent of their lines easily traced.

In Gasconade county, Missouri, are the ruins of an ancient town, regularly laid out, in streets and squares; the remains of some of the houses still exist, and foundations of stone are found in different parts of the area. Another stone work is situated about sixteen miles distant from this, which appears to have been constructed with great regularity.‡ Upon Buffalo Creek and the Osage river, ruins of similar stone buildings may be observed, evincing a superior degree of architectural skill.§ One, at Noyer Creek, has been more particularly described. It presents the dilapidated remnants of a building constructed of rough, unhewn stone, fifty-six feet long and

* N. F. Hyer's Account.

† Schoolcraft's Mississippi, p. 320.

‡ Beck's Gazetteer, p. 234.

§ Ibid. p. 306.

twenty-two broad. The walls are from two to five feet high, enclosing a semicircular, a square, and two oblong chambers. The oblong apartments were roofed with the arch of receding inverted steps, and the semicircular chamber contained several human bones. Eighty rods east from this building was another, of smaller dimensions and of similar construction, and having a circular apartment between two oblong ones, without any intercommunication.

Upon a low plain, on the south side of the Missouri river, opposite the upper extremity of Bonhomme Island, there has been discovered an ancient enclosure including an area of about *five hundred acres*.* It consists of two long straight walls, from six to fifteen feet in height and from seventy-five to one hundred feet in width at the base ; one running along the margin of the river, and the other proceeding from bank to bank, so as to take in the ground intervening and lying in the bend of the stream. A circular redoubt is situated upon the opposite extremity of Bonhomme Island, with a wall surrounding it, about six feet high. The extremity of one of the long walls is protected by a similar work, while the other end terminates in a species of citadel, of a semicircular shape, strongly fortified, and possessing horn-works, curtains defending the gateways, and covered ways to the river. The walls of these ruins are covered with large cotton-trees of full growth.

Similar remains have been observed in the Territory still further west of the State of Missouri, and also on the Platte, Kansas, and Jacques rivers.† Upon the banks of the Arkansas

* Lewis and Clark's Travels, p. 47.

† Ibid, p. 65.

river, is a regular fortification covering an area of twenty-five acres ; the walls are eight feet high, with deep ditches twenty-five feet broad. It has two entrances, and the appearance of a secret passage or covert way may be seen : in the middle are two truncated mounds, each eighty feet high and one thousand feet in circumference at the base.*

Other mural remains have been discovered within this state, and some of them are said to be constructed with brick ; but though we have every reason to anticipate such discoveries, and particularly in the region stretching towards Mexico, the authority for their existence is too uncertain for reliance, and needs further confirmation.†

From this brief outline of the ancient fossa, cities, walls and fortifications, it will be readily perceived that those in the state of Ohio have been the most carefully surveyed, and have received the most accurate descriptions, while as to those in other sections, we owe our acquaintance with them for the most part to accidental and hasty observations, seldom conducted upon any fixed plan, or from any other motive than casual curiosity. It is highly probable that the unexplored regions of the west still offer a rich field for future research, and will add immeasurably to our information upon a subject so intimately connected with the development of the history of this continent, and of its ancient inhabitants. Not the least important object of such

* Silliman's Journal, vol. iii. p. 38.

† " When at Little Rock we were strongly urged to visit an unexplored city, said to lie on the banks of Red River to the north-west of Alexandria, which is known in that remote country by the name of the Old Town. This, we were seriously assured, might be traced by

an investigation is the determination of the position, extent, and chain of continuity of these ruins, upon which circumstances depends in some degree the solution of a portion of the history of their authors.

embankments and ruins over an area twenty-three miles long, by four broad. Our informant stated that he should judge the cemetery to be a mile square."—*Latrobe's Rambler in North America*, vol. ii. p. 179.

CHAPTER IV.

ANCIENT REMAINS IN THE UNITED STATES.

THE last order of these antiquities in the United States consists of Mounds, which are square, oblong, or circular at the base, and conical or flat at the summit. They are either tumuli, terraced elevations in the vicinity of the mural remains, or truncated pyramidal erections. The tumuli are always the repositories of the dead, and it is probable most of the other mounds may have served, secondarily, as sepulchres; though the principal object of many, contiguous to the fortifications, was unquestionably defensive, while the purpose of others, and particularly of the larger truncated pyramids, was religious.

Where there exists so much resemblance in form, it is not always easy to distinguish the ancient tumuli from those thrown up by the Indians. The superior dimensions of the former usually present one mark of distinction, not always, however, satisfactory. In their contents we perceive surer indications of their origin, especially in the traces of the incineration of the dead, a custom not usually prevailing at present with the Indians. Another characteristic difference, but one not invariable, is exhibited in the nature of their materials—those of ancient workmanship appearing often to have been erected with alluvion dissimilar from the neighboring soil. It may be added also that the association of the ancient tumuli in

groups, and their proximity to the fortified enclosures, indicate an identity of origin. The regular form and position of those groups more isolated, and the symmetrical manner in which they are generally arranged, prevent any confusion between them and the less ancient structures proceeding from the Indians, which usually occur singly.

Many of the ancient tumuli consist of earth, and others of stone, the composition depending however upon the natural facilities for obtaining either material. Thus of three, discovered upon an elevated ridge in the state of Kentucky, two were of the former, and one of the latter description; all, however, exhibiting the same internal indications in other respects.* They had been erected over dead bodies, or rather over the ashes of the dead, as beneath them were ashes, calcined bones, and charred wood, enclosed in a grave formed of flat pieces of stone. These mounds were thirty-six feet in diameter, but only three in height; and they have been considered as of recent construction, though they are manifestly of the same character with others found on the Muskingum river, which are unquestionably ancient.† The latter were composed of earth, and had a basis of well burnt bricks, each four or five inches square, upon which were cinders, charcoal, and pieces of calcined human bones. A similar mound of large dimensions existed at Marietta, which on being removed was found to contain, besides pieces of copper, silver plate, and oxidized iron, one human body upon the surface of the earth, deposited with the face upwards, and the head pointing to the south-west. Blackened earth, charcoal, and a circular coffin of thin flat stones still dark and stained with

* Drake's Picture of Cincinnati, p. 201.

† *Archæologia Americana*, vol. i. p. 163.

smoke, demonstrated that the funeral obsequies had been celebrated by fire. This mound was six feet high, and thirty in diameter, and its materials were taken from the adjacent plain.

Another mound of similar dimensions, at a short distance from Marietta, on being examined was found to contain copper ornaments, together with the remains of a single skeleton, also probably burnt before burial.*

Near the centre of the circular enclosure at Circleville above described, was a tumulus about ten feet high. On the east side a raised passage-way led to its level summit, which was thirty feet in diameter, and on the same side was a semicircular pavement composed of pebbles.† This mound has been removed, and its contents were a great quantity of arrow or spear-heads; the handle of some iron instrument, as was thought, encircled by a ferule of silver; a large mica mirror three feet long; a plate of iron oxidized, and two skeletons twenty feet asunder, surrounded with ashes, charcoal, and well-burnt brick.*

At Cincinnati a mound eight feet high, sixty broad, and six hundred and twenty long,‡ on examination appeared to

* *Archæologia Americana*, vol. i. p. 175. † *Ibid.* p. 177.

‡ One of the first accounts, written in 1794, describes this mound as raised upon the margin of the second bank of the Ohio river, eight feet in height and with a base of about one hundred and twenty by sixty. Upon its surface were found stumps of oak trees seven feet in diameter. The articles which were found were near a body interred in a horizontal position, and with the head towards the setting sun. The instruments of stone were smoothly and regularly cut, and of great hardness. The copper was well wrought, and the carved bones were not human remains.—*Transactions of Amer. Phil. Soc.*, vol. iv. p. 178.

belong to the same class.* Its oval figure and correspondence with the cardinal points, evince the advancement in knowledge of its architects, which conclusion is not disproved by the character of its contents. These, besides articles of jasper, crystal, coal, and carved bones, consisted also of beads; lead, copper, and mica plates; *marine shells of the genus buccinum*, cut into domestic utensils, and the sculptured representation of the head of a voracious bird; while, as in the mounds before described, human bones appeared, some enclosed in coffins of stone, but all embedded in ashes and charcoal, the unfailing signs of the burning of the deceased.

In Knox county, Tennessee, upon the Holston river, are several pyramidal mounds, surrounded by an earthen entrenchment enclosing several acres.† At every angle of the embankment, it sweeps out into a semicircle; and it appears well calculated as a military work. One of the mounds upon being penetrated developed a quantity of ashes and charcoal. Near Newport, in the same state, is another mound thirty feet high, its base covering half an acre, and its superior surface level like those of the others.

Nine miles south-east from Lancaster, in Fairfield county,‡ Ohio, stood a mound one hundred and fifty feet in circumference, and fifteen feet in height. Upon examination, there was found at a level corresponding with the surface of the earth, a furnace of unhewn stone eighteen feet long, six wide, and one and a half high, having a stone apparently shaped with some instrument closing the mouth. Upon this furnace was placed a vessel

* Drake's Picture of Cincinnati, p. 205.

† Silliman's Journal, vol. i. p. 428.

‡ Dr. Kreider's Communication to Fairfield County Med. Soc.

of the same dimensions, two feet deep, and half an inch thick, made of earthenware, perfectly smooth, and well moulded; and underneath was a thick layer of ashes and charcoal, while the bottom of the vessel, from its appearance, had evidently been subjected to the action of heat. This huge caldron contained twelve human skeletons, of various size and age: around the neck of one of the children were beads of muscle shell, a piece of cane, entire shells, arrows, and a curiously wrought stone.

Near Newark, Ohio, is a conical *stone* tumulus, forty feet high, and with a base one hundred feet in diameter.* The tumulus described as ninety feet high, at Circleville, stood on an eminence which also appeared to be artificial.† It contained an immense number of human skeletons, of every size and age, all laid horizontally, with their heads towards the centre, and feet towards the outside of the mound. Stone axes, knives, and various ornaments were found deposited, generally near the head of every individual.

A mound formerly stood near the middle of the town of Chillicothe, fifteen feet high, and sixty feet in diameter.‡ Human bones occurred in various parts, on its being levelled; and at the surface of the earth, upon pieces of bark, lay a single human skeleton, covered with a mat; on its breast was an oblong stone ornament perforated with two holes, by which it was connected with a string of bone beads, *and a piece of copper in the shape of a cross.*

On the Grave Creek, Virginia, below Wheeling, is a large mound, seventy feet in height, with a level summit sixty feet in

* Delafield's Inquiry, p. 55. † Arch. Amer., vol. i. p. 179.

‡ Arch. Amer., vol. i. p. 182.—Description of the Ohio, etc. p. 36.

diameter.* The circumference of its base is three hundred yards; and there is no excavation in the vicinity whence its materials could have been obtained. At a short distance stand three smaller elevations, and several others appear scattered around in different directions. Some of these contained relics of copper, instruments of stone, and human bones; and one is encompassed by a ditch, and parapet five feet in height, intersected by a single gateway.†

One of these mounds has been recently penetrated on the north side, about four feet above the base, by a passage proceeding horizontally towards the centre. Two vaults were discovered, constructed at different dates; one placed near the top, the other near the bottom: they had been built with pillars of wood supporting a roof of stone. The lower chamber contained two skeletons,—the bones much decayed,—which appeared to have been buried in an erect or sitting position. In the upper chamber, besides the decomposed bones of a skeleton, there were found ivory beads, copper wristlets, small plates of mica, marine shells of the genus *voluta*, and a flat stone marked with unknown characters.

On the low grounds of the Kenhawa, in Virginia, near the junction of one of its branches, the Elk river, is a mound nearly forty feet in altitude. The circumference of its base measures one hundred and forty yards; its form is that of a truncated cone; and upon the summit there is a level area twelve or thirteen feet in diameter. Near it is a group of several smaller mounds; and within a few miles of this stands another, said to

* Harris's Tour, p. 62.—Silliman's Journal, vol. vi. p. 166.

† Amer. Phil. Trans., vol. iii. p. 215.

be much higher. No marks of excavation are to be seen in the neighborhood, and it is supposed that the earth employed in its erection was brought from some distance.*

On the Cahokia, nearly opposite to St. Louis, in the state of Illinois, within a circuit of four to seven miles, there are upwards of one hundred and fifty mounds. One of these, called The Monk mound, from having been occupied by some friars of the order of La Trappe, is truncated, and in the form of a parallelogram, stretching from the north to the south.† Its height is ninety feet, and the circumference of its base has been estimated to be from two thousand to two thousand four hundred feet.‡ Upon the southern side is a *terrace*, twenty feet lower than the summit, which formerly was approached by an inclined plane, projecting from its middle, about fifteen feet wide. The arrangement of some of the smaller mounds appears to have been made with reference to this; and the mounds of another group, near by, are symmetrically placed in the form of a semicircle. Arrow-heads, earthenware and human bones have been discovered in the vicinity, and by excavations into the body of the Monk mound. At the junction of the Catahoola, Washita and Tensa rivers, in Louisiana, another truncated mound, with a similar step or *terrace*, may be observed, surrounded by a group of smaller size.§

In the immediate vicinity of St. Louis, on the other side of the Mississippi, there are also several other groups of mounds. One of these mounds, situated on the second bank of the river, is formed with *three stages*, or platforms, upon the side facing

* Trans. Amer. Phil. Soc. vol. vi. p. 138.

† Beck's Gazetteer, pp. 43, 139.

‡ Brackenridge's Views, p. 173.

§ Ibid. p. 175.

the river; and another with *two stages*. The arrangement of these series of mounds is symmetrical, and they are generally in the form of truncated pyramids. Those of them that have been excavated have disclosed human bones, earthenware, charred wood, and other miscellaneous articles.*

Near Natchez is a number of mounds, several of which have been penetrated. Of these, a group about eleven miles from that city, is the most remarkable. One of them thirty-five feet high, of an oval form, and with precipitous sides, presents on its summit an elliptical area of four acres, encompassed by an embankment around the margin. Within this enclosure on the east side rises another mound fifteen feet high: on the north side are two more, on the south two, and on the west is a fifth thirty feet high, and with a flat summit. The large mound is surrounded by a ditch at its base, and on its sides are indentations, and projections resembling salient angles. In the middle of the area at the top of the mound, is the mouth of a subterranean passage leading to a spring, and in the opposite quarter towards the south are traces of a similar outlet. On the eastern side are two smaller elevations ten feet high, which appear like terraced bastions. Remains of excavated roads converging to this great work are still visible, and many weapons, implements, vessels, fragments of pottery and human bones† have been discovered.

Upon the north side of the Etowah river, in Georgia, is a mound seventy-five feet high, and one thousand in circumference at its base.‡ An inclined plane for the purpose of ascent to

* Trans. Am. Phil. Soc., vol. i. p. 155.

† Southwest by a Yankee, vol. ii. p. 224.

‡ Silliman's Journal, vol. i. p. 322.

its level summit extends from one of its sides; and two others, after rising thirty or forty feet, terminate in triangular platforms or *terraces*, upon the other side. At the south-east is another mound with its top encircled by a breastwork.*

In Florida there are numerous mounds. Some upon the shores of the sea are composed of shells, and have been found to contain clay-ware, ashes, and charcoal. One found on Penon island, of a conical form, upon being opened disclosed human bones; and De Soto is said to have obtained from others pearls, "and the figures of children and birds made also of pearl."† Numbers of earthen mounds appear throughout the whole of this territory, unconnected with the ancient fortifications; and from their being found bearing at cardinal points from each other, remote from natural landmarks, and in conspicuous situations, it is supposed they were intended as marks of territorial division.‡

On the eastern margin of a prairie at the back of Vincennes in Indiana, are several uncommonly large mounds, presenting the form of vast truncated cones. "In the immense masses of earth employed in their construction, and perhaps also in their comparatively ill-defined basal margins, these tumuli bear a close resemblance to the mounds of St. Louis.§

Mount Joliet, another mound of some celebrity, is situated in the northern part of the state of Illinois, and was first ob-

* Mr. Adair describes two of these structures which existed in the Choctaw country. They were of great size, of an oblong form, and both enclosed by a broad deep ditch and a breast-work.—*Adair*, p. 378.

† A Relation of the Invasion and Conquest of Florida, etc. pp. 64, 65.

‡ G. F. Clarke's Essay. § Schoolcraft's Mississippi, p. 157.

served by the Sieur Joliet in 1673.* It is an oval structure corresponding in its position with the cardinal points; the length of its base is about one thousand feet, and its breadth seven hundred and fifty. It is of a pyramidal form, level at the top, and one of the largest mounds in the United States.

Near New Madrid, Missouri, a number of mounds occur, one of which is twelve hundred feet in circumference, and forty in height. It is also truncated, and surrounded at its base by an entrenchment and ditch.†

Upon the Arkansas river, just below the town of Arkansas, formerly stood a large mound, forty feet high, situated towards the centre of a circle of other smaller mounds, and some elevated platforms, or terraces of earth.‡

Such is a brief sketch of the most remarkable of the ancient mural remains, mounds, and other relics of the nations which formerly occupied a large portion of our country. In these monuments are we presented with the only direct testimonies wherefrom to deduce some historical knowledge of their authors; and before proceeding further, it may be well to inquire what facts appear to be established at this stage of the investigation.

1. *Their identity of origin.*—The general character of all

* Beck's Gazetteer, p. 141.

† Ibid. p. 304.

‡ Nuttall's Arkansas, p. 69.—Vide also, Trans. Amer. Phil. Soc., vol. iii. p. 217.

At Baton Rouge there are mounds composed entirely of shells, like some of those in Florida. Mr. Brackenridge says, "I have been informed that in the plains between the Arkansas and St. Francis, the mounds are numerous and some very large," and he also gives a list of fifteen different places, at the West, where there are extensive groups of these monuments.—*Trans. Amer. Phil. Soc.*, vol. iii. p. 155.

these remains indicates an origin from the same nation, or from branches of the same people. Although there is some variety to be observed in their form and arrangement, yet certain leading and predominant features distinguish them all; and, from a careful survey, we are urged to the conclusion, that they proceeded from nations possessing similar customs and institutions.

2. *Their extent and locality.*—These ruins extend over a wide district of territory: commencing in the state of New York, and stretching along the western line of the Alleghanies, at the south they bend eastwardly through Georgia, and are terminated only by the ocean in the southernmost part of Florida. At the west, we find them in great numbers upon the margins of all the western waters, reaching far up towards the sources of the Mississippi, and scattered along the banks of the Missouri and of its branches, and thence down to the Gulf of Mexico and beyond the Red River towards Mexico, whither, although the line has not yet been accurately followed, they can probably be traced. Indeed, Mr. Brackenridge observes, that “the distance from the large mound on the Red river to the nearest in New Spain is not so great, but that they might be considered as existing in the same country.”*

It will be perceived, then, that at no point do they touch the Atlantic ocean, except in Florida; that at the north and west, so far as discoveries have been made, they find a limit, and do not approach the colder regions, nor reach to the shores of the Pacific; while, on the other hand, at the south-west they range towards Mexico, and nearly in a direct and unbroken chain of

* Trans. Amer. Phil. Soc., vol. i. p. 156.

continuity. That Florida was not the first seat of these nations, whence they were diffused towards the valley of the West, appears from the reflection, that among all nations the first extension of population has been along the shores of rivers and oceans. If Florida had been their first and original position, they would naturally have extended their settlements along the Atlantic frontier; but there we find no indications of their existence, and it would appear to be a just inference to suppose, that the course of migration has been from the great western valleys southwardly into Florida. At the south-west, however, we trace them towards Mexico; thither, then, so far as any indications exist in their locality and position, are we directed in the investigation of their origin.

3. *Their numbers.*—In the description just given of these ruins, those only have been pointed out which are remarkable for their contents, size, and peculiarity of structure, or which are important in developing the extent and position of the territory occupied by their authors. A vast multitude of others, of a similar character, occur throughout the district whose limits have been indicated, demonstrating beyond a doubt, that the whole of this immense region was in the possession of these nations. The author just quoted, whose accurate personal observations entitle his statements to great weight, in relation to the number of the earthen enclosures or fortifications, remarks, "The traces of them are astonishingly numerous in the western country. I should not exaggerate if I were to say that five thousand might be found, some of them enclosing more than a hundred acres;" and of the mounds and tumuli, he says that they are much more numerous.* This statement, though

* Trans. Amer. Phil. Soc., vol. i. p. 153.

intended to apply to but a portion of the country covered with these ruins, is no less true of the remainder ; and when reflecting how many of them must have disappeared in the cultivation of the soil, without attracting more than a local and temporary attention, and how many may have escaped observation, covered as they are with forests, it is difficult, perhaps, to entertain too exaggerated an idea of the immense population which once crowded this spacious territory.*

4. *Their antiquity.*—The character of these structures affords one argument for their antiquity ; for they are not entrenchments thrown up hastily by migrating hordes, but on the contrary the ruins of cities and temples, some, of the most massive and durable dimensions, and all indicating the existence of a population permanently established. But we are not to suppose that they are all of contemporaneous origin ; and for this as well as other reasons, we are compelled to give a superior antiquity to those located in the West : and as we trace the gradual diffusion of population from that quarter, it is apparent how long a period must have elapsed before the structures on the confines of this great empire were erected ; add to this the time intervening between their construction and their abandonment, the length of which is left entirely open to conjecture,—for we know not how long these nations flourished,—and the mind is irresistibly led back to a remote date. But even the precise epoch of their desertion lies beyond all direct and positive traditionary

* Professor Rafinesque ascertained upwards of five hundred ancient monuments in the state of Kentucky, and fourteen hundred out of it, most of which he had visited and surveyed personally.—*MS. Letter*, 1824.

testimony, while certain physical appearances would favor the opinion of its antiquity. Most of these monuments are covered with forests; and while many of the trees, from their vast size and the number of their annular layers of wood, are apparently of great age, the vestiges of decayed wood, and the absence of that uniformity of character peculiar to a recent second growth, demonstrate that several generations of trees have sprung up and disappeared since these works were deserted.

The full force of this argument cannot be more strongly illustrated than by citing the lucid description given by the late President of the manner in which the forests are gradually restored to the soil after its tillage is abandoned. "The process," he remarks, "by which nature restores the forest to its original state, after being once cleared, is extremely slow. In our rich lands it is indeed soon covered again with timber; but the character of the growth is entirely different, and continues so through many generations of men. In several places on the Ohio, particularly upon the farm which I occupy, clearings were made in the first settlement, abandoned, and suffered to grow up. Some of them now to be seen, of nearly fifty years growth, have made so little progress toward attaining the appearance of the immediately contiguous forest, as to induce any man of reflection to determine, that at least ten times fifty years would be necessary, before its complete assimilation could be effected. The sites of the ancient works on the Ohio, present precisely the same appearance as the circumjacent forest. You find on them all that beautiful variety of trees, which gives such unrivalled richness to our forests. This is particularly the case on the fifteen acres included within the walls of the work at the mouth of the Great Miami, and the relative proportions of

the different kinds of timber are about the same. The first growth on the same kind of land once cleared, and then abandoned to nature, on the contrary is more homogeneous—often stinted to one or two, or at most three kinds of timber. If the ground has been cultivated, yellow locust in many places will spring up, as thick as garden peas. If it has not been cultivated, the black and white walnut will be the prevailing growth. The rapidity with which these trees grow for a time, smothers the attempt of other kinds to vegetate and grow in their shade. The more thrifty individuals soon overtop the weaker of their own kind, which sicken and die. In this way there is only as many left as the earth will support to maturity.” “This state of things will not, however, always continue.” “The preference of the soil for its first growth, ceases with its maturity. It admits of no succession upon the principles of legitimacy. The long undisputed masters of the forest, may be thinned by the lightning, the tempests, or by diseases peculiar to themselves; and whenever this is the case, one of the oft-rejected of another family will find, between its decaying roots, shelter and appropriate food, and springing into vigorous growth, will soon push its green foliage to the skies, through the decayed and withering limbs of its blasted and dying adversary; the soil itself yielding it a more liberal support than any scion from the former occupants. It will easily be conceived what a length of time it will require for a denuded tract of land, by a process so slow, again to clothe itself with the amazing variety of foliage which is the characteristic of the forests of this region. Of what immense age then must be those works, so often referred to, covered, as has been supposed by those who have the best opportunity of examining them, *with the second growth, after*

the ancient forest state had been regained.”* These evidences are therefore similar in one respect to all the other facts adduced to prove the age of these remains, for while they establish that the era of their erection is not modern; while they oppose not a single objection to their great antiquity; they still fail in pointing out with any degree of certainty the precise era of their construction.

In attentively examining the localities in the vicinity of the mounds and mural remains, we observe various physical changes which have manifestly occurred since their construction—and which are usually the result only of the long, gradual, and continued action of natural causes. Thus in Florida, lakes which were formerly approached by artificial avenues, have since become dry. At the west, lakes and rivers upon whose margins these ruins are perceptible have deserted their ancient beds and channels,† and in the state of New York the line of mural remains is bounded by the ancient shores of lakes Erie and Ontario. There is nothing to contradict this conclusion, as to their

* A Discourse on the Aborigines of the Valley of the Ohio, by William Henry Harrison.

† “They are for the most part in rich soils and conspicuous situations. In the prairie regions, where I have seen the greatest number, they are covered with tall grass, and generally near benches which indicate the former course of rivers. In my farm on the beautiful prairie below St. Charles, the Mamelle or ‘Point Prairie,’ were two conical mounds of considerable elevation. A hundred paces in front of them was a high bench marking the shore of the Marais Croche, an extensive marsh, and evidently the former bed of the Missouri.”—*Flint’s Recollections*, p. 166.

Trans. Amer. Phil. Soc. vol. iii. p. 154. Scientific Tracts, New Series, vol. iii. p. 157.

great antiquity, in the present state of preservation of the mounds and mural remains. Earthen structures are not greatly altered by age ; but little perceptible change is made upon them by the action of the elements, if they are favorably located, and it is certain that monuments of a similar character are among the most ancient which have been preserved from antiquity, and are more enduring than the most solid specimens of architecture.

5. *The means of subsistence of these nations.*—The evidences of the numerous population formerly inhabiting the sites of these ruins, would suggest an inquiry as to their means of subsistence. It is probable some traces of their agriculture still existed not many years since ; but the situation of the towns and cities would appear to be decisive of this question, for we find them usually upon the shores of streams and upon the richest soil,—as if the choicest spots for the cultivation of the earth had been selected.

6. *Their institutions.*—Civilized nations, living in populous communities, cannot subsist without some controlling form of government—for law affords one of the elementary distinctions between savage and civilized life, and its protective influence is necessary and essential to the encouragement of the arts. The existence also of such vast public works would fortify this conclusion, and indicate some power capable of controlling and combining the labor of large numbers of men.

7. *The objects of these structures.*—That the tumuli, and many, if not all of the truncated mounds have served as sepulchres, may be inferred from the contents of the great number of them already examined ; but we are not to conclude that this was the sole purpose of these enormous artificial elevations.

The level areas upon their summits, the careful manner in which some have been guarded by entrenchments, their relative situation to the fortified enclosures, and the regularity with which several of the groups have been arranged, suggest some other object. Numbers of them in the immediate vicinity of the fortifications are so disposed, as to demonstrate that they assisted in the defence of those positions. Others, and this remark applies to the majority of the important ones, from their astronomical position and their correspondence with the cardinal points, as well as from their analogy to the monuments of other nations, it is reasonable to presume were sacred edifices, and bore the altars of the gods.

The enclosures were likewise of two classes; some, of a regular geometrical form and small dimensions, as the one at Circleville, having been intended for religious purposes; and others, of a more irregular shape, and sometimes containing immense areas, having been occupied as cities and fortresses. It may be remarked, that, from a peculiarity in the disposition of some of the earthen embankments around the sites of cities, and from the existence of long and continued lines of others along the margins of rivers, it would appear as if they had also served for the protection of the enclosed areas, and the circumjacent plains from the disastrous effects of inundations.

Sometimes we find embankments extended to great distances, which, judging from their width, situation, and other circumstances, may very well have served as roads.* The

* The Indians had wide and extensive paths—war or hunting paths—which stretched great distances, and having been opened from time immemorial, it has been supposed some of them denote the course of the roads of the ancient inhabitants.

long oval enclosures, often encircling a mound at one end, concerning which much conjecture has been exercised, and which resemble the Roman *cursus*, were probably devoted to a similar purpose, and were traversed on festival days by those religious processions which were so frequent in the sacred ceremonies of the Mexicans.

Where, it may be asked, are the remains of the dwellings of these nations? The same question arises upon viewing the ruins of the Mexican temples and pyramids now standing in solitude. Its solution rests in the fact, that, like all primitive people, while the houses of their princes and their gods were erected in the most durable manner, with the greatest labor, of the most massive materials, and adorned with the most exquisite and noble architectural embellishments, the tenements of the poor were of more humble dimensions, materials and structure. It is probable the latter were wooden and clay huts, or, at the best, like the dwellings of the Egyptians, composed of crude brick.* Thus, as might have been anticipated, their religious monuments still remain, while of the dwellings that surrounded them hardly a trace can be distinguished.

8. *The fortifications*.—The best military judges have observed the skill with which the sites of many of the fortifications have been selected, and the artful combination of natural advantages with artificial means of defence exhibited in their con-

* Wilkinson, vol. ii. p. 96.

"What," says Denon in his *Travels into Egypt*, "has become of the residences or palaces of the kings? Were they built of unbaked and therefore perishable earth—or did the great men as well as the priests, inhabit the temples, and the people only huts?"—*Denon's Travels*, vol. iii. p. 58.

struction.* The care taken in their erection must have been necessary for protection against a powerful external enemy, or from internal wars. The latter probably was partially the case, as, extrinsic of other reasons, it is hardly likely that at so early a period, and in a state of semi-civilized society, this great people were united under one sovereign, or were free from internal commotions and revolutions.

Upon the whole, we may with justice say of these nations, from a review of their relics and monuments thus far,

1. That they were all of the same origin, branches of

*Bishop Madison (*Trans. Amer. Phil. Soc.* vol. vi. p. 132,) has clearly shown that many of these enclosures never could have been intended as fortresses, and with this conclusion the following opinion of a competent judge coincides.—“Great as some of the latter are, and laborious as was their construction, particularly those of Circleville and Newark, I am persuaded *they were never intended for military defences*. On the contrary, those upon the Ohio river were *evidently* designed for that purpose. The three that I have examined, those of Marietta, Cincinnati, and the mouth of the Great Miami, particularly the latter, have a military character stamped upon them which cannot be mistaken.” The engineers “who directed the execution of the Miami work appear to have known the importance of flank defences, and if their bastions are not as perfect, as to form, as those which are in use in modern engineering, their position, as well as that of the long lines of curtains, are precisely as they should be.”—*Harrison's Discourse*.

Carver, who was one of the first to notice these works, makes a similar remark in relation to the entrenchments he discovered near Lake Pepin. “Though much defaced by time,” he observes, “every angle was distinguishable, and appeared as regular, and fashioned with as much military skill, as if planned by Vauban himself.”—*Carver's Travels*, p. 45.

the same race, and possessed of similar customs and institutions.

2. That they were populous, and occupied a great extent of territory.

3. That they had arrived at a considerable degree of civilization, were associated in large communities, and lived in extensive cities.

4. That they possessed the use of many of the metals, such as lead, copper, gold and silver, and probably the art of working in them.

5. That they sculptured in stone, and sometimes used that material in the construction of their edifices.

6. That they had the knowledge of the arch of receding steps; of the art of pottery,—producing utensils and urns formed with taste, and constructed upon the principles of chemical composition; and of the art of brick-making.

7. That they worked the salt springs, and manufactured that substance.

8. That they were an agricultural people, living under the influence and protection of regular forms of government.

9. That they possessed a decided system of religion, and a mythology connected with astronomy, which, with its sister science geometry, was in the hands of the priesthood.

10. That they were skilled in the art of fortification.

11. That the epoch of their original settlement, in the United States, is of great antiquity; and,

Lastly, That the only indications of their origin, to be gathered from the locality of their ruined monuments, point towards Mexico.

CHAPTER V.

ANTIQUITIES IN MEXICO AND THE ADJACENT STATES.

No portion of the globe offers more decisive evidence, of having been occupied for many ages by civilized nations, than the southern regions of North America. At the time of the discovery, the ancient remains in the United States were deserted, and the people, by whom they had been erected, were apparently extinct; so that the question of their origin was a subject of inquiry to the antiquary, rather than to the historian. In the vast territory at the south, however, another spectacle was presented: there the Spanish invaders found populous nations,—regularly organized states—aristocratical, monarchical and republican forms of government,—established systems of law and religion—immense cities, rivalling in the style, character and magnificence of their edifices and temples, those of the old world; and roads, aqueducts and other public works, seldom excelled in massiveness, durability, and grandeur. The inhabitants were clothed, the soil was tilled, many of the arts had been carried to a high degree of advancement, and their knowledge in some of the sciences equalled, if not surpassed that of their conquerors. Guatemala was occupied by many distinct tribes, each enjoying its own peculiar government, and institutions; and the same remark applies to Yucatan, and other neighboring countries. That extensive tract of land

known as Anahuac, a name which though originally limited to the vale of Mexico was subsequently applied to most of the region formerly denominated New Spain, was divided into several kingdoms and republics, of which the kingdom of Mexico was the most powerful and extensive.* Though the commencement of this empire dates in the year 1325, when the city of Mexico was founded, yet this warlike and enterprising people, at the conquest, had brought under their sway many of the surrounding nations, and their dominions reached from the 14th to the 21st degree of north latitude, and from the Atlantic to the Pacific Ocean.

With these facts clearly presented to us in history,—with these evidences of the existence of numerous states, advanced in civilization, and in the arts, it may appear singular, that in so short a period as three hundred years, it has become the part of the antiquary, to pore over the ruins of their monuments; as if to gather the history of an extinct people. But the civilization found existent there was of a peculiar character; the great mass of the people were uncultivated; society was kept in a state of order, not by the intelligence of the people, but by their veneration for their rulers; the public records, the festivals, the arts and sciences, and even agriculture, were all committed to the charge and direction of the priesthood; and when their governments fell before the assaults of their invaders, and their religion yielded to Catholic zeal, their institutions and civilization perished in a common grave. These causes alone, however, are not sufficient to account for the absolute ruin that befell these nations. The Spaniards not only waged a war of

* Clavigero, vol. i. pp. 1, 123.

extermination against the natives themselves, but, from various motives, sought to obliterate every vestige of their former power, and opulence. They spared neither monuments nor records, and strove to destroy every object, that might preserve to a despised race, the memory of what they had been; or that could tend to make them cling the more tenaciously to their old institutions and customs. Fortunately, the vast extent and dimensions, and the solid and massive character, of many of these monuments, defied all attempts to destroy them, and triumphing alike over time and violence, they still serve to shed some light upon the history of their authors.*

Fresh from the consideration of the majestic pyramidal mounds of the United States, the first and most natural objects of attention are the pyramids of Spanish America, the most ancient and the most expressive of all its ruins.

Pyramids. The finest temple of the city of Mexico was one of the victims of Spanish bigotry, and for a description of this great "Teocalli,"† we are compelled to resort to the narratives of the conquerors.

Its location was in the central square of the city, and it was dedicated to Tezcatlipoca, the first of the gods after Teote the Supreme Being, and to Huitzilopochtli or Mexitli, "the God of War."‡ It was built after the model of those ancient pyramids

* Some of the idols in the city of Mexico, which they were unable to break, were deliberately buried in the earth; and it is a curious instance of the tenacity with which the natives have adhered to their old superstitions, that when one of these idols was recently disinterred, the Indians secretly, in the night time, crowned it with garlands of flowers.

† "House of God."

‡ Humboldt's Researches, vol. i. p. 83. De Solis, vol. i. p. 398.

supposed to have been founded by the Toltecs, and had been erected but a short period before the landing of Cortez. The main building was surrounded by a wall of hewn stone, upon which were sculptured knots of serpents, intertwined together. The four sides of this wall faced the cardinal points respectively, and the residences of the priests were immediately adjacent to it, within. In the middle of this square stood the Teocalli, constructed of clay, and covered with enormous masses of hewn porous amygdaloid.* This edifice was a truncated pyramid built with five stories; its sides faced the cardinal points; the line of its base was three hundred and eighteen feet long, and its perpendicular elevation one hundred and twenty-one feet.† Flights of stairs led to its superior platform, where were placed the sacrificial stone, and chapels containing the idols of the gods. Here also were the colossal statues of the sun and moon, formed of stone, and covered with plates of gold.‡ Eight principal temples, of similar character, are said to have existed within the city, and the number of those of inferior dimensions amounted to two thousand. This picture might seem to be overdrawn, were there not sufficient vestiges remaining, in the ruins of other Teocallis, to attest the truth of its leading features, and to confirm its accuracy by extrinsic evidence.§

* Humboldt's Political Essay, vol. ii. pp. 15, 16.

† Fifty-four metres high according to Humboldt. This altitude included that of the edifices upon its summit.—*Humboldt's Researches*, vol. i. p. 84.

‡ Humboldt's Researches, vol. i. p. 86. De Solis, vol. ii. p. 177.

§ Waldeck says, "The descriptions of the Mexican Teocalli are *very contradictory*. Some terra cottas represent them in minia-

The most remarkable objects still existing, within the limits of the city of Tezcucó, in Mexico, are the remains of the chief Teocalli, some of the stones of which have been transferred into the pavements, and into the walls of dwellings, betraying their original destination and use, by the figures of animals, hieroglyphical symbols, and other ornaments, sculptured upon them. The base of this pyramid extended over an area four hundred feet square, and the sides rose in terraces, some of which are still visible, covered with a hard and durable cement.* Though other pyramidal buildings in its neighborhood are constructed of brick, this appears to have been formed of enormous masses of basalt, regularly cut, and beautifully polished.

To the east of the holy city of Cholula, still stand the ruins

ture, and on a great number of them I have always counted eleven steps or platforms. There is great resemblance between these terra cottas and the great pyramid of Itzalan." This remark, so far as it refers to the minor details of these structures, is accurate, but as to their leading and general form and style, there is certainly a great coincidence in all the accounts. Torquemada estimated the number of temples in the Mexican Empire at forty thousand, and Clavigero says the number was far greater. "The architecture of the great temples," he adds, "was for the most part the same with that of the great temple of Mexico; but there were many likewise of a different structure—many consisted of a single body in the form of a pyramid, with a staircase," etc.—*Clavigero*, vol. i. p. 269. Gomara says, "they had almost all the same form, so that what we shall say of the principal temple, will suffice to explain all the others." See also *De Solis*, vol. ii. pp. 177, 214, 222. Some authors represent the base of the Mexican temple to have been of greater length than breadth, like those of Teotihuacan.

* *Modern Traveller, Mexico*, vol. i. p. 331.

of the celebrated pyramid, estimated to have been the largest in all Mexico, and sacred to Quetzalcoatl, the "God of the Air." The base covered an area double that of the Egyptian pyramid of Cheops, being one thousand four hundred and twenty-three feet in length; and its height was one hundred and seventy-seven feet, ten feet higher than the pyramid of Mycerinus. It was constructed of alternate layers of clay and unburnt brick, was divided into four separate stories or stages, and ranged exactly in the direction of the cardinal points. The passage to the summit of this truncated pyramid appears to have been made originally by a flight of steps, one hundred and twenty in number. An ancient tradition maintained that this pyramid was hollow; which has since been verified, and a vault has been discovered, built of stone, supported by beams of cypress wood, and containing two skeletons, together with two basaltic idols, and several curious vases.* An arrangement of the bricks has also been observed in its internal structure, tending to lessen the pressure from above, by such a disposition as to make the upper course overlap the under, in the form of inverted steps—a method often found in use in several Egyptian and other ancient edifices. In the same manner as the pyramids of Teotihuacan, the large pyramid was surrounded by many smaller ones, the ruins of which still faintly appear in the adjacent plain.†

* Humboldt's *Researches*, vol. i. p. 91. *Modern Traveller, Mexico*, vol. i. p. 252. Humboldt's *Political Essay on the Kingdom of New Spain*, vol. ii. p. 120, English translation.

† Latrobe, p. 205.

Cortez, in a letter to the Emperor Charles V., dated October 30, 1520, says he counted four hundred of these temples at Cholula.

Near Tacuba, a populous city at the conquest, are the ruins of an ancient pyramid, constructed with layers of unburnt brick in regular courses.* In the vicinity of Huexotla near Tezcucó are also several pyramids built with layers of unburnt brick, and clay, one of which shows appearances of having been hollow,† which circumstance was discovered by part of it having fallen in.

Xochicalco, or "the House of Flowers," is situated upon the elevated plain of Cuernavaca, at a height of nearly six thousand feet above the level of the sea.‡ It appears to be a hill formed into an artificial shape by human labor, and is nearly three miles in circuit. Its base is encircled by a moat or ditch, and the rocky mass is cut into the shape of a truncated pyramid, with its sides corresponding with the cardinal points, and divided into four terraces. The intermediate slopes are covered with platforms, bastions, pyramidal and rectangular elevations and stages, one above the other, all faced with large porphyry stones admirably cut, but joined together without cement: the perpendicular height is estimated to be from three hundred to three hundred and eighty feet.

Upon the north part of the upper area is a truncated pyramid "constructed of large regularly hewn and symmetrically laid masses of hard and richly sculptured rock." Its base is in the line of the parallels and meridians, and is about fifty feet in length. It formerly consisted, as is stated, of seven stories, portions of two only now remaining. The construction of the

* Latrobe's Rambler in Mexico, p. 99.

† Modern Traveller, Mexico, vol. i. p. 335.

‡ Latrobe's Rambler in Mexico, pp. 185, 190. Humboldt's Political Essay, vol. ii. p. 45. Modern Traveller, Mexico, vol. i. p. 339.

stories is singularly like the Egyptian style of architecture, the lower parts inclining inwards at an angle of 15° , for a short distance, and then being surmounted with perpendicular courses projecting over the inferior portion. Upon the stones of this pyramid are many figures sculptured in relief, some representing hieroglyphic signs, and others human figures seated cross legged in the Asiatic manner, and crocodiles spouting water.*

It is probable that the interior of this monument contains many apartments, as it is ascertained that subterranean chambers and galleries enter deeply into the side of the hill. Paved roads or causeways run from different points of the compass to the base of "the House of Flowers," indicating, whatever was its purpose, that it was the resort anciently of great numbers of people.†

In the northern part of the former Intendancy of Vera Cruz, near the village of Papantla, are the remains of another pyramid, constructed of enormous blocks of hewn stone, regularly laid in cement. Each side of its quadrangular base is eighty feet in length, and its altitude is sixty feet. It is a truncated pyramid,

* These stones are parallelopipeds, and the reliefs are sculptured continuously over several stones, without regard to the joints, whence it has reasonably been inferred that the sculpture was executed after the erection of the structure.—*Humboldt's Researches*, vol. i. p. 112.

† There has arisen much discussion whether this work is wholly artificial. The recent observation of a modern traveller, without entering further into the argument, seems to decide the point, as "its position and configuration show it to be one of the group of adjacent hills."—*Latrobe's Rambler in Mexico*, p. 185. Xochitl signifies a flower.—*Humboldt's Researches*, vol. i. p. 160.

and is divided into seven terraces: three staircases lead to the top, which are decorated with small niches supposed to have had an astronomical use or signification.*

To the north-east of the Lake of Tezcuco, eight leagues from the city of Mexico, are the two pyramids of Teotihuacan, traditionally sacred to the sun and moon.† The larger pyramid, dedicated to the worship of the sun, is one hundred and eighty feet in height, and its base is six hundred and eighty-two feet in length; and the pyramid of the moon is about one hundred and forty-five feet high. Both are divided into four stages, subdivided into smaller steps, and stairs of hewn stone rose to the superior platforms. They are composed of clay commingled with small stones, and are faced with amygdaloid, which has been coated with a red or salmon-colored cement formed of small pebbles and lime.

Upon the area at the top of the pyramid of the moon, are the ruins of a stone edifice, forty-seven feet long, and fourteen wide, with an entrance at the south.‡ This pyramid has an entrance on the southern face, at two-thirds of the elevation, by a passage inclining downwards, and opening into a gallery, at the end of which are two wells now closed, except for about the distance of fifteen feet. The wells seem to be in the centre of the edifice.§ Upon the summit of the pyramid of the sun

* Humboldt's Researches, vol. i. p. 87. Humboldt's Political Essay, vol. ii. p. 172.

† Humboldt's Researches, vol. i. p. 85. Humboldt's Political Essay, vol. ii. p. 42. Modern Traveller, Mexico, vol. i. pp. 330, 338.

‡ Latrobe's Rambler in Mexico, p. 160.

§ Latrobe, p. 161. The discovery of this entrance, were it an

are the remains of broken earthenware, said to resemble closely the Chinese patterns, pieces of obsidian, and the mutilated bodies of idols.* Indeed obsidian knives, arrows, and terra cotta heads, abound in this vicinity. The heads have a physiognomical appearance somewhat unlike that of the present Indians, being remarkable for the height and formation of the forehead, and for a curious head-dress. They are composed of clay well tempered, and slightly baked. Around these pyramids, as at Cholula, are many smaller ones, several hundreds in number, arranged in parallel lines or streets running in the direction of the cardinal points,† and facing the sides of the pyramids of the sun and moon. These are generally about thirty feet high, and by tradition were said to have been sepulchres for the chiefs of tribes, and to have been dedicated to the stars. A broad road leads from the southern side of the house of the moon, passes directly before the western face of the house of the sun,‡ and then bears away over the plains, towards the mountains.

Besides the remains of the pyramids just described, many ancient one, would indicate that some reliance is to be placed upon the ancient traditions; for, according to one of these mentioned by the early travellers, the interior of these pyramids is hollow; but it is possible that the passage entered by Mr. Latrobe is the work of Siguenza, who, according to Boturini, endeavored to pierce these edifices by a gallery.—See *Humboldt's Political Essay*, vol. ii. p. 42.

* Latrobe, p. 161.

† "The faces of these edifices are to within 52' exactly placed from north to south, and from east to west."—*Humboldt's Political Essay*, vol. ii. p. 42.

‡ Tonatiuh Ytzaqual—House of the Sun; and Mitzli Ytzaqual—House of the Moon.

others are to be observed among the ruins of the ancient cities in Mexico, Central America, and Yucatan.* At the conquest there was no place of any importance, but what boasted of many of these stupendous edifices; and the narratives of the conquerors are filled with expressions of astonishment at their vastness and grandeur, and the magnificence and splendor of their decorations. Most of these, and in particular such as were of inferior size, were despoiled and overthrown by the Spaniards; while those more ancient structures which served as their models,—the pyramids of Cholula and of Teotihuacan,—probably from their enormous dimensions, escaped the general ruin. An idea of the fearful system of indiscriminate destruction pursued by the invaders may be gathered from the letter of Cortez to Charles V., in which, speaking of the plan adopted for the subjugation of the city of Mexico, he says: “I formed the design of demolishing on all sides, all the houses, in proportion as we became masters of the streets, *so that we should not advance a foot, without having destroyed and cleared down whatever was behind us.*” Thus continually, in the examination of these ancient monuments, are we called to lament that barbarian

* Mr. Lyon describes some near Panuco, which were from thirty to forty feet high.—*Lyon's Tour*, p. 55. Many ruins of sepulchral mounds are to be seen in Yucatan.—*Humboldt's Political Essay*, vol. ii. p. 162. At the south side of Merida are the ruins of a Teocalli upon which a fort has been erected. Many of the houses of Merida have been constructed with fragments of the pyramids. In the base of one of these monuments a tomb has been opened and found to contain the bones of the tapir and of some other mammiferous pachydermata: upon the remains of another, the Convent of St. Francisco has been built.—*Waldeck*, pp. 18, 23, 55.

fury, which in the heat of conquest was restrained from no excess; and even to share and sympathize in the feelings of the poor vanquished Indians, as they saw the objects of their deepest reverence levelled with the dust.

Ancient cities and other ruins. From the causes just alluded to, as well as from the gradual depopulation, and finally, the abandonment of many important cities whose sites are now only conjecturally known, but a faint conception can be obtained at the present period of their former size and numbers. The old writers, many of whom were eye-witnesses, whose accounts were given after a long residence in this country, give us a high idea of its ancient population. Clavigero has collected these testimonies with exceedingly great industry, and has succeeded in establishing that this portion of the continent was occupied by populous nations, whose numbers were so great that in the vicinity of their towns, according to Cortez, "not a foot of the soil was left uncultivated," and whose cities were not only numerous, but contained, some of them, from thirty to sixty thousand houses.

Tezcucó. The ruins of this city, which with its suburbs was even larger than Mexico, and according to Torquemada contained one hundred and forty thousand houses, still betoken an ancient place of great importance and magnificence. Without the walls, tumuli, the sepulchres of the former inhabitants, may yet be observed, and also the remains of a fine aqueduct in a sufficient state of preservation for present use. Within the city limits, excavations have developed the foundations of large edifices, and every surrounding object points it out to the traveller, as the former residence of a numerous, and cultivated population.* In its

* Latrobe, p. 141. Modern Traveller, Mexico, vol. i. p. 331.

vicinity there is a conical hill, rich in antiquities, covered to the very summit with the massive ruins of splendid buildings, and perforated with artificial excavations. The sides of this elevation are terraced in some places with solid masonry-work, in other parts the terraces are cut into the rock, and the exterior of the whole has been covered with cement, or stucco-work. The walls of one large building are yet partly standing, and a reservoir is perceived which supplied it with water. But the most singular object connected with this mountain of ruins, is a specimen of art, which without any sufficient reason has been denominated traditionally "Montezuma's Bath."* This piece of workmanship is excavated from the side of a cliff, and projects beyond it "like a martin's nest." It is a beautiful basin about twelve feet long by eight wide, having a well five feet in diameter and four deep in the centre, surrounded by a parapet two feet and a half high, with a throne or chair placed near it, such as is represented in ancient pictures, to have been used by the kings. Steps descend into the bath, and the whole is cut out of the living porphyry rock with mathematical precision, and polished in the most beautiful manner.† Commanding a picturesque prospect of the fine valley of Mexico, its lakes and city, a more enchanting spot for the luxury of the bath cannot well be imagined. But it is more than doubtful whether such was its object, and it has been suggested with much probability that it served for an astronomical purpose.‡

* Latrobe, p. 141.

† Modern Traveller, Mexico, vol. i. p. 334.

‡ A recent traveller varies in his account rather widely from this description, particularly with regard to its dimensions, and he states very positively that it could not have been a bath, or rather that it is

Huexotla. Two miles from Tezcucó, the village of Huexotla, situated on the site of the ancient city of that name, which was considered as one of the suburbs of Tezcucó, exhibits signs of ancient civilization, in the foundations of large edifices, in massive aqueducts, one of which, covered with rose-colored cement, still exists in a perfect state, and in an extensive wall of great height and thickness.* A covered way flanked by parallel walls proceeds from the ancient city, to the bed of a stream now dry, over which there is a remarkable bridge, with a pointed arch† forty feet high, and supported on one side by a pyramidal mass of masonry.‡

Mitlan. In the district of Zapoteca, ten leagues from Oaxaca, occur the ruins of Mitlan, consisting originally of five edifices symmetrically arranged. The approach is made by a gateway, which opens upon a court one hundred and fifty feet square surrounded by four oblong buildings, in one of which the remains of two columns are still visible. The fifth and largest edifice, which has best withstood the ravages of time, is placed upon a terrace or elevated platform rising above the court: it is one hundred and thirty feet in length, and contains a spacious hall, whose roof of savine wood is supported by six monolithic porphyry columns, nineteen feet high, destitute of capitals, and slightly contracted at the summit. The

too small for any other use, than a foot bath.—*Latrobe's Rambler in Mexico*, p. 141.

* *Modern Traveller, Mexico*, vol. i. p. 335.

† *Latrobe*, p. 139.

‡ The Mexicans constructed bridges of stone, and *Clavigero* mentions the remains of "large and strong pilasters" which supported the bridge over the river Tula.—*Clavigero*, vol. ii. p. 371.

architecture is all of a solid character, the doorway of this hall being covered by a single stone twelve feet long. From an inner court of this building, a broad flight of steps leads to two subterranean apartments, arranged in the form of a cross, and supported by columns. Each of these excavated galleries, which intersect each other at right angles, is eighty-two feet long and twenty-six broad, and they are decorated with Greek and arabesque ornaments. The exterior walls of the upper apartments are similarly embellished, while their interior surface is covered with paintings, representing weapons, trophies, and sacrifices. The arabesques are formed in a species of mosaic work made with small square porphyry stones imbedded in clay, and the Greek ornaments are supposed by Humboldt, to have a striking analogy to those of the Etruscan Vases.*

Palenque. In Chiapa, near the village of San Domingo Palenque, are the ruins of a city, which it is said can be traced over an area six or seven leagues in circumference.† The part of these remains which exists in the most perfect state, has received the name of "Casas de Piedras," or the Stone Houses.‡ These edifices are fourteen in number, and are erected upon an

* Humboldt's Political Essay, vol. ii. p. 155. Researches, vol. ii. p. 152.

† Description of the Ruins of an Ancient City, discovered near Palenque, by Captain Don Antonio Del Rio, p. 4.

Del Rio and Dupaix have given Palenque a circuit of seven leagues, while its remains, according to Waldeck, occupy at the most a surface of but one league in extent. "If its extent," says Waldeck, "had been more considerable, I should have discovered it in a sojourn of twelve years."—*Waldeck*, p. 68. Juarros describes the remains of the city as occupying a site six leagues in circumference.

elevated ridge of land rising from the river Micol, and its branch the Otolum. A rectangular area, three hundred yards by four hundred and fifty, presents a plain surface at the foot of one of the larger mountains of the neighboring group. Around this square the buildings are disposed, five on the north side, four on the south, one on the south-west, and three on the east,—while in all directions, the fragments of fallen edifices and monumental stones are to be seen extending several leagues along the base of the mountain. The largest structure is situated in the middle of the square, upon a mound sixty feet in height. Beneath it runs an aqueduct of stone, constructed with the greatest solidity.* The architecture of this edifice is on a scale of great magnitude. The ascent to the summit of the mound and the entrance of the building were upon the east side. The four sides had corridors or porticoes, the roofs of which were supported by plain rectangular pillars, without bases, and crowned by square blocks of stone,† above which were long blocks of stone stretching from column to column; these were covered on their outer surface with designs in stucco work. From each of these porticoes there was an entrance to chambers, whose walls were ornamented with medallions or compartments in stucco, alternating with niched windows. Some of the medallions appear to have contained a series of busts and heads various in their expression and form; in those of the western chamber, the device being a species of grotesque mask, with a crown and long beard, under which are two crosses one within the other. The arrangement of the other apartments seems to have been somewhat irregular. Among

* Del Rio, p. 4.

† Ibid. p. 9.

them are two rooms, denominated oratories, adorned with designs in stucco, and containing statues ornamented with strings of jewels. In other chambers we find various devices and sculptures of a curious character, and of admirable execution. In the subterranean vaults constructed beneath, which are destitute of architectural or plastic ornaments, there are horizontal slabs of stone, seven feet by four, placed upon four square stands of masonry rising about half a yard above the floor. Within an open court in the middle of the whole pile of buildings, stands a pyramidal tower of four stories, and fifty feet in height, within which is another tower, with windows facing those of the exterior one, and with a flight of stairs leading to the summit.

The remaining thirteen edifices appear to have been constructed in a corresponding style. The one to the south-west is situated upon an eminence forty yards high, and its stucco ornaments are remarkable for the representations of female figures, delineated as headless, and carrying children in their arms. The four southern buildings are erected likewise upon elevations, and three of them contain oratories. The pavements or floors of these oratories upon excavation, were found to contain, first, an earthen vessel, and second, a circular stone, beneath which were two small pyramids with the figure of a heart in dark crystallized stone, a lance head, and two covered earthen jars holding some substance of a vermilion color.* The designs in stucco, the bas reliefs and sculpture, observed so frequently in these ruins, represent

* Vases or urns containing bones, together with burnt bricks and mortar, were also found.—*Del Rio*, p. 20.

a great variety of figures, most of them appareled, and decorated with pearl necklaces, caps and helmets adorned with flowers, and a multitude of other ornaments. A peculiarity attends all the human representations in the great size of the nose, a remarkable protrusion of the under lip, and the absence of a beard. Other relievos exhibit human sacrifices,* hieroglyphical symbols, and men dancing with palm-leaves in their hands. One figure, presumed to be a deity, is sitting in Hindoo style, upon a throne ornamented on each side with the enormous head and claws of an animal, and another seated cross-legged upon a two-headed monster, is receiving an offering from a man in a kneeling attitude ; and it is observed of all these representations that every appearance of martial instruments seems to be wanting. It may be added that some of the windows of these buildings are in the form of the Greek cross,† and that on the wall of one of the apartments is a tablet of sculptured stone, exhibiting the figure of a large and richly ornamented cross placed upon an altar or pedestal.‡ A priest stands on one side in the attitude of adjuration, and on the other side appears another priest presenting some offering,—it has been supposed, a young child. Upon the top of the cross is seated a sacred bird, which has two strings of beads around its neck, from which is suspended something in the shape of a hand, probably intended to denote the manitas. This curious flower was the production of the tree called by the Mexicans, *macphalxochitl*, or “flower of the hand.”§ It resembled the tulip, but the pistil was in the form of a bird’s foot, with six fingers terminated with as many nails.||

* Del Rio, p. 11. † Del Rio, pp. 9, 10. ‡ Del Rio, Plates.

§ The *Cheirostemon platanoides*. || Clavigero, vol. i. p. 19.

Patinamit.—The once strong and opulent city of Patinamit, in Guatemala, was situated upon an elevated plain of great extent. Upon one side of a spacious square, within its limits, were the remains of an edifice one hundred paces in length, constructed of hewn stone; opposite to which stood the ruins of a magnificent palace. A fosse nine feet deep with a wall of mason-work, now three feet high, bisects the city from north to south, and is said formerly to have separated the residences of the higher and lower orders. The streets were broad and straight, intersecting each other at right angles. A deep natural trench surrounds the whole city, the sole entrance having been made over a narrow causeway, through a gateway formed of the chaya stone.*

Zacatecas.—Several miles to the north of Villa Nueva in the province of Zacatecas, and about fourteen leagues to the southward of the city of Zacatecas, occur extensive ruins, among which are buildings still standing, nearly entire, called "Los Edificios."† They are situated upon the south, east, and west sides of a mountain or steep and abrupt rock, which has been cut with great labor into artificial terraces. This ancient city was approached from the south-west by a causeway ninety-three feet broad, which commences at an enclosure containing about six acres and surrounded by a broad wall, of which the foundations are still visible running first to the south and afterwards to the east. Off the south-western angle of this enclosure, stands a high mass of stones, which also flanks the entrance to the causeway. In its present ruined appearance this tower is of a pyramidal

* Description of Fuentes, A. D. 1700, cited in *Mod. Trav. Mexico*, vol. ii. p. 271.

† Lyon's *Journal of a Tour in Mexico*, vol. i. pp. 225, 226, &c.

form, but on close examination its figure can be traced by the remains of solid walls, to have been a square of thirty-one feet at the base, and of the same height. On the other side of the causeway is a similar tower more injured and decayed. From this spot the causeway runs to the north-east, the distance of four hundred yards, where it reaches the foot of the cliff. At this point two other towers, similar to those described at the entrance of the causeway, may be observed; these probably guarded the inner entrance to the citadel. In the middle of the causeway, which is raised about a foot and has its rough pavement still uninjured, is a large heap of stones, as if the remains of an altar, around which may be traced a paved border of flat slabs arranged in the figure of a six-rayed star.

As you ascend into the city, the first object striking the attention, is a quadrangle two hundred and forty feet by two hundred, which to the east is sheltered by a strong wall of unhewn stones eight feet in thickness and eighteen in height. A raised terrace twenty feet in width passes around the northern and eastern sides of this quadrangle; on the south-east corner of the eastern terrace is yet standing a round pillar of rough stones, eighteen feet high and nineteen feet in circumference, and there appear to have been five other pillars on the eastern, and four on the northern terrace.*

From the eastern side of this quadrangle you enter another, entirely surrounded by perfect walls of the same height and thickness as those of the former one, and measuring one hundred and fifty-four feet by one hundred and thirty-seven. In this are yet standing fourteen very well constructed pillars, of equal dimensions with that in the adjoining enclosure, and arranged four

* Lyon's Journal of a Tour in Mexico, vol. i. p. 227.

in length and three in breadth of the quadrangle, from which on every side they separate a space of twenty-three feet in width, probably the pavement of a portico, of which they once supported the roof. In their construction, as well as in that of all the walls of these ruins, a common clay, having straw mixed with it, has been used as a cement.

About three hundred yards to the northward of these quadrangles, is a perfect, square, flat-topped pyramid of large unhewn stones, standing unattached to any other buildings, at the foot of the eastern brow of the mountain, which rises abruptly behind it. Its base measures fifty feet, and its height precisely the same. Off the south-east corner of this pyramid, and at about fifteen yards distance, is to be seen the edge of a circle of stones, eight feet in diameter, enclosing a bowl-shaped pit, in which the action of fire is still plainly visible,—the earth containing soot and ashes mixed with pieces of broken pottery.

At the distance of one hundred yards south-west of this pyramid, is a small one, twelve feet square, much injured, and situated on somewhat higher ground, in the steep part of the ascent to the mountain's brow. On its eastern face, which is towards the declivity, the height is eighteen feet, and apparently there have been steps by which to descend thence, to a quadrangular space, extending east one hundred feet by a width of fifty, and surrounded by a broad terrace. In the middle of this enclosure is another bowl-shaped pit somewhat wider than the first.

This quadrangle and the pyramids just described are on the eastern side of the mountain, in the ascent of which, other ruins are encountered. On this eastern face is a platform twenty-eight feet wide, faced by a parapet wall; and from the base of

this wall extends a second platform one hundred and eighteen feet wide, with a similar parapet. These form the outer defensive works of the mountain, which from its figure has materially favored their construction. From this eastern face a slightly raised and paved causeway, about twenty-five feet in width, descends across the valley in the direction of the rising sun, and being continued on the opposite side of a stream which flows through it, can be traced up the mountains at two miles distance, until it terminates at the base of an immense stone edifice.*

In the ascent to the edifices upon the mountain, a well buttressed, but ruined wall is passed. This is a double wall, one ten feet wide, having been first constructed, and then covered with a very smooth kind of cement; after which the second has been built against it. Its height on the steepest side is twenty-one feet, and the width on the summit, which is level with an extensive platform, is the same. This platform faces the south, measures eighty-nine feet by seventy-two, and on its northern side stand the ruins of a square building, having within it an open space, in the middle of which rises a mound of stones, eight feet in height.

A little further on from this platform, there is an entrance, by a broad opening between two very perfect and massive walls, to a square of one hundred and fifty feet, surrounded on the south, east, and west, by an elevated terrace, having in the middle of each side steps whereby to descend into the square. On the south of this square are two broad entrances,—on the east, is another thirty feet in width, communicating with a perfect enclosed square of two hundred feet; and on the west is a

* Lyon's Journal, vol. i. p. 229.

small opening, leading to an artificial cave or dungeon.* To the north, the square is bounded by the steep mountain, and in the middle of that side stands a pyramid with seven stages, which in many places are quite perfect. It is flat-topped, has four sides, and measures at the base thirty-eight by thirty-five feet, while its height is nineteen. Immediately behind this pyramid, and on all that portion of the hill which faces the square, are numerous tiers of seats, either cut in the rock, or built of rough stones. In the middle of the square, and due south of the pyramid, is a small quadrangular building, five feet high, which it has been supposed was an altar.

On the west of this square are the remains of an aqueduct, and the entrance to the cavern before alluded to. This entrance is narrow, well built with burnt brick, and smoothly plastered, but in consequence of the removal of some beams of wood that supported the roof, it has fallen in, and become impassable. The cave, it has been thought, was a place of confinement for victims, who were sacrificed in the great square just described, and then precipitated down a cliff in its immediate vicinity. "A road or causeway terminates at the foot of this precipice, exactly beneath the cave, and overhanging rock ; and conjecture can find no other idea of its intended utility, unless as being in some manner connected with the purpose of the dungeon."

From this point the ascent conducts to numerous other buildings, and to several tanks, constructed with great care and strength. From the summit of the rock, there may be distinctly traced three straight and very extensive causeways diverging from the causeway first described. The most remarkable of these, which is forty-six feet in width, commences at a high

* Lyon's *Journal of a Tour in Mexico*, vol. i. p. 232.

and long artificial mound, immediately beyond the river, towards the Hacienda of La Quemada, runs south-west for two miles, and crossing the grand causeway is continued to the foot of the cliff, immediately beneath the cave. The second may be traced south-south-west four miles, and the third, south-west by south still further, ceasing, as is reported, at some mountain six miles distant. All these roads are slightly raised, are perfectly straight, and paved with rough stones.

On the summit of a rock terminating the ridge, about half a mile to the north-west of these ruins, are other buildings : among them there may be distinguished a regular pyramid, with sloping sides, a square base, and flat top, and with steps in the middle of its southern face, by which to ascend to the summit ; and also massive walls, long mounds of stone, and a small square pyramid with three steps or terraces.

In the vicinity, the remains of plaster have been found, and porphyry arrow-heads, but no fragments of obsidian. An immense block of porphyry is pointed out, called "*Piedra del Monarca*," on which there is a natural or artificial indentation, somewhat resembling the print of a naked foot, which, as the tradition runs, has been caused by actual pressure.*

* This description has been taken, with great freedom, from Captain Lyon's valuable account, and has been rather minutely transcribed, from the circumstance that it presents evidence of the existence of ruins far to the north of Mexico, which are analogous to those in Central America and Yucatan : for which reason also it has been placed in the text so as to facilitate immediate comparison with the latter. M. Joseph Burkart also visited these ruins, during his residence in Mexico, and in his opinion, they "date their origin from a period long, very long before the conquest of Mexico by the Spaniards."

Copan.—In Honduras, on the right or northern bank of the river Copan, a tributary of the Motagua, are the ruins of the ancient city of Copan. The remains of fallen buildings are to be observed extending along the river for two miles; and among these, at an elevation of forty yards above the water, and standing at the eastern extremity of the city, is a large edifice, two hundred and fifty yards long from north to south, and two hundred yards broad from east to west. Its base appears to have been an elevated terrace, accessible from the exterior, on three of its sides, by stone steps, which in some parts are in a state of ruin. After ascending these, there is a descent by flights of stairs into a square in the middle of the edifice, twenty yards above the level of the river: a gallery scarcely four feet high and two and a half broad leads from this square, through a more elevated part of the building overhanging the river, to an opening on the face of the precipice. Among many excavations, one made at the entrance of this gallery disclosed a sepulchral vault, more than six feet high, ten feet long, and five and a half broad, and lying due north and south according to the compass. Upon each of its sides there were two niches, which, as well as the floor of the vault, were full of red earthenware dishes and pots, many of them filled with human bones packed in lime. The floor of the vault was constructed of solid stone coated with lime, and was strewed with fragments of bones. Among the articles found in this chamber were knives of *chaya*, stalactites, marine shells; and a small head, apparently representing death, its eyes being nearly shut and the lower features distorted: it was of exquisite workmanship, and “cut out or cast from a fine stone covered with green enamel.”

The most remarkable objects in these ruins are stone col-

umns, ten or eleven feet high and about three broad, with a less thickness, seven of which are standing entire, and numerous others fallen and destroyed. Upon one side of these obelisks were wrought in low relief human figures, sculptured with a full front and with their hands resting on their breast: "they are dressed with caps on their heads, and sandals on their feet, and clothed in highly adorned garments, generally reaching half-way down the thigh, but sometimes in long pantaloons." The back and sides of the obelisks generally contain hieroglyphics in square tablets; and opposite these monuments, at a distance of three or four yards, was commonly placed a stone table or altar. One of these altars, in the temple, which is two feet four inches high and four feet ten inches square, contains upon its top forty-nine square tablets of hieroglyphics; and its four sides are occupied by sixteen human figures in low relief, sitting cross-legged on cushions carved in the stone, with fans in their hands.

"Monstrous figures are found amongst the ruins; one represents the colossal head of an alligator, having in its jaws a figure with a human face, but the paws of an animal; another monster has the appearance of a gigantic toad in an erect posture, with human arms and tiger's claws. On neighboring hills stand, one to the east and the other to the west of the city, two obelisks containing hieroglyphics alone, in squares; these obelisks, like the generality of those in the city, are painted red, and are thicker and broader at the top than at the bottom. Mounts of stone, formed by fallen edifices, are found throughout the neighboring country."*

* This description is taken from a paper, written at Copan, by Colonel Galindo, late Governor of the Province of Peten, in Central

Copan at the conquest was a large and populous city ; we find it mentioned as inhabited so late as 1570, but it is now deserted.* From the description afforded by Fuentes, as cited in Juarros, there is reason to suppose that some of the obelisks were arranged in a circular form. He wrote in the year 1700, and describes as existing at that time, entire, " the Great Circus of Copan," " a *circular* space surrounded by stone pyramids about six yards high, at the bases of which are figures, both male and female, habited in the *Castilian costume*, of very excellent sculpture, and *colored*." " In the middle of the area," he adds, " a flight of steps led to the place of sacrifice. At a short distance is a stone gateway, on the pillars of which are sculptured figures, likewise in Spanish habits ; and on entering this gateway two fine stone pyramids present themselves, from which is suspended a hammock containing two human figures clothed in the Indian style. Astonishment is forcibly excited on viewing this structure, because, large as it is, there is no

America, and published in *Archæologia Americana*, vol. ii. p. 545. The author, in his Communication to the President of the American Antiquarian Society, explains the cause of its brevity in the following words: " The Government of Central America intends publishing, in Castilian, a long report I have drawn up, with relation to the ruins and history of this place, with various plans, views, and copies of figures and inscriptions ; I therefore at present confine myself to these few remarks."

* Colonel Galindo says that " this place remained long celebrated for the superior quality of its tobacco ; but the cultivation of this plant being removed, as royal property, to the Llanos de Santa Rosa, towards the east, seventy-five years ago, Copan has gradually fallen into decay, and is now reduced to a small hamlet, in the western suburb of the ancient city."—*Arch. Am.* vol. ii. p. 459.

appearance of the component parts being joined together ; and although entirely of stone, and of an enormous weight, it may be put in motion by the slightest impulse of the hand.”*

About seventeen leagues directly south of Merida in the peninsula of Yucatán are the ruins of Uxmal or Itzlan.† The same exaggerated statements have been made with regard to the extent of these remains, as in relation to those of Palenque. These edifices are situated on a plain eight leagues long and from one half to two leagues broad ; those we are about to describe occupy, however, but a small circuit. In the seventeenth and eighteenth centuries they were in a good state of preservation, and most of the injuries now perceptible are of recent date.‡ These monuments when discovered were in the midst of a forest, with trees growing everywhere upon their surface. The city, according to Waldeck, is extended in a south-westerly direction ; and in the space of eight leagues, many monuments may be found at short intervals from each other. The most remarkable edifices lie together, and consist, in the first place, of four great buildings, arranged on the sides of a quadrangular terrace,

* Juarros, cited in *Modern Traveller, Mexico*, vol. ii. pp. 299, 300. Waldeck says that this hammock is not to be found at Copan.

† *Voyage Pittoresque et Archéologique Dans La Province D'Yucatan*, 1834, 1836, par Frederick De Waldeck, p. 68.

‡ Uxmal, says Mr. Waldeck, signifies “ *Temps passé*,” p. 68. Cogolludo and Gutierre are referred to by Waldeck, as “the only guides of modern authors.” But Uxmal is probably the same place as was visited by the Rev. Father Thomas de Soza, and described as situate twenty leagues to the southward of the city of Merida, and where he reported that he had seen stone edifices covered with stucco ornaments and statues of men beating drums, and dancing with palms in their hands.—*Del Rio*, p. 7.

which is fifteen feet high, and about a thousand in circuit; its sides corresponding accurately with the cardinal points. The length of the building which faces the south is two hundred and twenty-nine feet eight inches, and its breadth twenty-seven feet eight inches. It is divided into sixteen chambers disposed in two rows, over the doors of which there are rings of stone, supposed to have been used as supporters to tapestries or curtains; and two lateral chambers across which, beams of wood, one of which is still visible, appear to have been placed, wherefrom hammocks, it is conjectured, were suspended. Over the doorways of these chambers, and on the inner façade of the building, are eighteen representations of the sign calli: these representations are variously ornamented. The whole of this extensive building is bisected by a great doorway or entrance, whence you penetrate into the great square or court. This edifice is not so high as any of the other four, the loftiest of which is the one situated on the northern side of the square.

The monument on the north side is much decayed and disintegrated, but its dimensions, the number of its chambers, and the character of its ornaments, are precisely like those of the southern building.

The edifice on the eastern side of the terrace is one hundred and seventy-six feet five inches long, thirty-four feet six inches broad, is entered by four doorways, and is divided into fourteen chambers; upon its façade an emblem of the sun similar to the Mexican is repeated seven times.

That on the western side of the terrace is, with a slight variation, of the same size, except in height, and of the same general construction as the others. Within, and enclosed by this quadrangular mass of buildings, is a corridor six feet

wide running round the four sides, whence there is a descent by a flight of steps from each of the four temples to a spacious open rectangular court. This court is curiously paved with stones six inches square, each of which is exquisitely cut in demi-relief, with the full and accurate figure of a tortoise. These are arranged in fours, with the heads of the tortoises together. They are forty-three thousand six hundred and sixty in number, covering the whole superficies of the court, and though composed of a very hard stone, appear much worn.

The terrace on which these four edifices are erected, was accessible on its eastern and southern sides, by stairs or steps, which now are little more than inclined planes, for most of the steps have crumbled away. This terrace was flanked on its northern and southern sides, at a short distance, by ten tumuli symmetrically arranged—five on each side—which have been destroyed in the search after treasures; and in its vicinity are other remains of terraces and buildings, which, so far as they have been examined, appear to be of a similar character. The Great Teocalli which is situated to the east of the mass of buildings just described, is a lofty pyramid,* with an exterior coating of stone work. The stones used at the base are the largest, and their size diminishes as you proceed upward to the platform. The slab above the door, and the four pillars of the eastern façade of the temple on its summit, are the only large stones observable in this structure. This pyramid was ascended on the eastern side by a flight of one hundred steps, each of which was one foot high and five inches broad. Its superior platform is ninety-one feet eight inches long,

* Mr. Waldeck says, "the loftiest and most remarkable of fifteen I have seen." p. 71.

and forty-five feet wide, and supports a temple eighty-one feet eight inches long, by fourteen feet eight inches broad. This temple contained three chambers, and on its front, on the western side of the pyramid, is a little platform, the sides of which are curiously sculptured, and whereon, it is supposed, sacrifices were performed; after which the dead bodies were precipitated down the side of the pyramid. On the western façade of the temple are four human figures, similar to Caryatides, cut in stone, with great fidelity and elegance. Their hands are crossed upon the breast, and hold some instrument; the head is enveloped in a covering resembling a casque, with an ear appendage like the Egyptian; about the neck is a garment of the skin of the Caiman, with a border beautifully worked; and about the body is a girdle. Above each of these is a sculptured death's head, with four cross-bones. All these sculptures are executed with great richness, and are brilliantly colored. The east façade of the temple has two apartments or doorways, and two little pavilions, each supported by two pilasters, above which appear some indications of capitals. The sides of this pyramid were covered with trees,* and are very precipitous: upon its corners, it is thought the head of the elephant is sculptured.

It may be observed in conclusion that at Uxmal no reliefs in stucco appear, but all its sculptures are in stone, well cut; and some of them subsequently covered with stucco. The ruins are of a colossal character, and on a scale of grandeur. The walls of the chambers in the temples, though constructed of hewn stone, are stuccoed with a hard black stucco, and there

* The largest trees were only five inches in diameter.—*Waldeck*, p. 98.

are no paintings upon them. These cells have no windows, and their ceilings are arched with the Cyclopean arch. The small stones which ornament the façades of the temples, are cut with great care into precise geometrical figures, and are laid with extreme accuracy. "J'ai mesuré tous ces details," says Waldeck, "J'ai fait glisser le plomb sur toutes les jointures, et je n'ai jamais trouvé la plus légère deviation sous le cordeau."

Many symbolic figures and hieroglyphics are represented on various parts of the ruins ; these are all of consequence, in a comparative view of the American Antiquities, but in one instance we have a design of great singularity. It consists of a double triangle and globe, so arranged as to suggest the idea of having been intended to symbolize the four elements, earth, air, fire and water.

Seven leagues from Merida are ruins of edifices constructed with stones of enormous size, and covered with sculptures. They are called "Tixhualajtun," a word, it is said, signifying "a place where one stone is over another." Here have been observed one hundred and seventeen stones, sculptured with hieroglyphic signs, and inserted in the wall. The empty places of fourteen of these stones, which have fallen down, are observed, which make, together with the others, one hundred and thirty-one, marking, as is maintained, one hundred and thirty-one Katouns or Maya ages. A part of this wall has fallen down, so that the whole number of Katouns which may have existed there is left to conjecture.*

Beneath the city of Campeachy are subterranean chambers excavated in the rock. It is difficult to say whether they were employed as dwellings or as sepulchres ; though the

* Waldeck, p. 73.

latter conjecture appears the most probable.* Not far from this city are some fine ruins, and also a large tumulus together with several smaller ones of different sizes. It is said that the island of Cozumel where Cortez first landed, lying off the north-eastern coast of Yucatan, also abounds in ancient remains.

Of the fortifications of the Mexicans and the neighboring nations, the annals of the conquerors afford us very copious descriptions. For the protection of their towns and cities, they employed palisades,† ditches,‡ entrenchments and walls of solid mason-work. Besides the vestiges of these works still to be perceived near some of the ruins of cities already described, others have been discovered more justly entitled to the rank of fortresses. Near the village of Molcaxac, the top of a mountain is surrounded by four walls placed at some distance from each other, from the base to the summit of the mountain. Twenty-five miles north of Cordova are the ruins of the fortress of Guatusco, consisting of high walls of stone, the only access to which is by a flight of high and narrow steps.§ Among the traces of the ancient fortifications may yet be observed those of the great wall of Tlascala,|| a monument which in its design and character reminds us of similar structures in the eastern hemisphere. It was constructed, as Cortez was informed by the Indians, by the “ancient inhabitants” of that republic, to defend themselves against the invasions of their enemies: other portions of the frontier were protected in a similar manner by ditches and entrenchments.¶ De Solis describes it as “a great wall which ran from the one mountain to the other, entirely stopping up the way: a sump-

* Waldeck, pp. 9, 10, 11, 28, 102.

† De Solis, vol. i. p. 93.

‡ Ibid, vol. ii. p. 391.

§ Clavigero, vol. i. p. 313.

|| Humboldt's Pol. Essay, vol. ii. p. 119. Clavigero, vol. i. p. 373.

De Solis, vol. ii. p. 235.

¶ Clavigero, p. 34.

tuous and strong piece of building, which showed the power and greatness of the owner. The outside was of hewn stone cemented with mortar of extraordinary strength. It was twenty feet thick and a fathom and a half high; and on the top was a parapet after the manner of our fortifications. The entrance was narrow and winding, the wall in that part dividing, and making two walls, which circularly crossed each other for the space of ten paces.”* Clavigero, who says its remains were still visible when he wrote, describes it as stretching from one mountain to another, six miles in length, eight feet in height, besides the breastwork, eighteen feet in thickness, and as made of stone cemented with mortar.†

The remains of the Granaries and Temazcalli have not wholly disappeared. The former were storehouses in which the maize was collected, and were constructed either of wood or stone. The only entrances or outlets were two windows, one near the base, the other near the top of the building and somewhat larger than the former. The Temazcalli or vapor baths were built with stone or brick, in the form of a dome. The entrance was low and near the bottom, the floor was slightly convex and the roof arched, the height from five to six feet, and the diameter about eight.‡

None of the ruins exhibit the skill, enterprise, industry and perseverance of the ancient inhabitants, more than those of their roads and aqueducts. Many of these have already been incidentally noticed; and it is manifest from the remains of some of their roads, that both in their design, and in the cha-

* De Solis, vol. i. p. 242. English Translation, London, 1738.

† Clav. vol. i. p. 373.

‡ Clav. vol. ii. p. 371. Ibid. vol. i. pp. 429, 377.

racter of their structure, they were public works worthy of any of the civilized nations of Europe in the sixteenth century. Along these were stationed, couriers, who communicated intelligence from one part of the country to another—a system of posting we are surprised to find existing in America at that period. The city of Mexico, which was built on several islands near the shore of the lake, was connected to the mainland by four great causeways or dikes, the remains of which still exist.* One of these to the south, the same by which Cortez entered, was nearly two leagues long—another to the north about one league, and the third at the west somewhat less.† The fourth supported the celebrated aqueduct of Chapoltepec, by which water was conducted from springs, upon an insulated hill of that name, at the distance of from two to three miles. They were all constructed in a massive style with earth and stone, and with the exception of the last were so broad that ten horsemen could ride abreast.‡ These causeways and the roads which led from them were of recent construction, and demonstrate that the Mexicans were fully competent to the erection of monuments equal to the ancient roads of Xochicalco and Zacatecas.

The aqueduct of Chapoltepec consisted of two conduits formed of solid mason work§—each five feet high and two paces broad—by which the water was introduced into the

* Humboldt's Political Essay, vol. ii. p. 32.

† De Solis, vol. i. p. 394. Clavig. vol. ii. p. 71.

‡ Cortez says in his letter to Charles V., they were "of the breadth of two lances."

§ De Solis, vol. ii. p. 414. Ibid. vol. i. p. 408. Humboldt's Pol. Essay, vol. ii. p. 30. Clavig. vol. i. p. 421.

city for the supply of various fountains. Olid and Alvarado commenced the siege of Mexico by attempting to cut off this supply of water, an enterprise which the Mexicans endeavored to prevent. "There appeared on that side," says De Solis, "two or three rows of pipes, made of trees hollowed, supported by an aqueduct of lime and stone, and the enemy had cast up some trenches to cover the avenue to it. But the two captains marched out of Tacuba with most of their troops, and though they met with a very obstinate resistance, they drove the enemy from their post, and broke the pipes and aqueduct in two or three places, and the water took its natural course into the lake." Humboldt says, there are still to be perceived the remains of another aqueduct, which conducted to the city the waters of the spring of Amilco, near Churubusco. This aqueduct, as described by Cortez, consisted of two conduits composed of clay tempered with mortar, about two paces in breadth, and raised about six feet. In one of them was conveyed a stream of excellent water, as large as the body of a man, into the centre of the city. The other was empty, so that when it became necessary to clean or repair the former, the water might be turned into it;* which was the case also with those of Chalpoltepec, "of which one was always in use, whenever the other required cleaning."†

Sculpture. We still can trace among the natives of this part of the continent, indications of that peculiar talent for rich, complicated, and laborious sculpture, which must have distinguished the authors of the idols, statues and planispheres

* Robertson's Hist. Am. note 148. De Solis, vol. ii. p. 414. Loenzano, p. 108, cited in Humboldt.

† De Solis, vol. i. p. 408.

that adorned their palaces and temples. Humboldt remarks, that the Mexicans have preserved a particular fondness for the art of carving in wood or stone, and expresses his astonishment "at what they are able to execute with a bad knife on the hardest wood,"* and at their "great aptitude in the exercise of the arts of imitation." Waldeck makes a similar remark of the Yucatanese, and speaks of their natural talent and skill for carving in stone, even with the rudest instruments.† Besides the remains of ancient sculpture which have been found in many of the ruins already described, there are some other idols and monuments which merit attention, both as justifying these observations, and as possessing some interest in themselves.

Within the cathedral of Mexico, sunk in the earth, with the surface alone visible, is the celebrated piece of sculpture called the Stone of Sacrifice. It is a porphyry stone, twenty-five feet in circumference, containing in the centre a head in relief, surrounded by twenty groups of two figures each, all represented in the same attitude.

One of the figures is always the same; being a warrior, with his right hand resting on the helmet of a man, who is offering him flowers in token of submission, and who, supposed to represent a captive, wears the dress of the nation to which he belonged; behind him is a hieroglyphic denoting the conquered province. On the upper surface of the stone, there is a groove of some depth, designed to let off the blood of the victims. This stone, as is thought by Humboldt, was intended as an area, upon which the customary gladiatorial contests between foreign prisoners destined for sacrifice, and six Mexican warriors, took place. If the unfortunate captive succeeded in

* Political Essay, vol. i. p. 129.

† Waldeck, p. 34.

conquering all his opponents, notwithstanding the great numerical advantage against him, he was released ; otherwise the tragedy terminated in his being dragged to the altar by the priest, who there put an end to his existence by opening his breast and tearing out his heart.

In the wall of the same cathedral, there is another stone called Montezuma's watch, or the Calendar stone. This is likewise formed of porphyry, it weighs twenty-four tons, is finely cut and polished, and is twenty-seven feet in circumference. In its centre is a head in relief, representing the sun with a yawning mouth, and protruding tongue, similar to the image of Kala, the Chronos of Hindostan. This head is surrounded by a double row of hieroglyphics ; the outer one of which is divided into twenty compartments, and cut by eight triangular rays ; the whole system of symbols being encircled by three rows of ornaments in relief, tastefully designed and executed with precision and neatness.*

The idol of the goddess Teoyamiqui, which lies concealed in the University of Mexico, a statue of colossal dimensions, and terrible form, is described by a modern traveller, " as hewn out of one solid block of basalt, nine feet high. Its outlines give an idea of a deformed human figure, uniting all that is horrible in the tiger and rattlesnake. Instead of arms, it is supplied with two large serpents, and its drapery is composed of wreathed snakes, interwoven in the most disgusting manner, and the sides terminating in the wings of a vulture. Its feet are those

* Upon the hill of Tezcucuo, near Montezuma's bath, there was formerly another Toltec Calendar stone, in a perpendicular wall of rock, the sculpture of which is now wholly defaced.—*Latrobe's Rambler in Mexico*, p. 140.

of a tiger, and between them lies the head of another rattlesnake, which seems descending from the body of the idol. For decorations, it has a large necklace composed of human hearts, hands, and skulls, and it has evidently been painted originally in natural colors.”*

At Tezcuco, lying neglected under a gateway, an idol has been observed, nearly perfect, and representing a rattlesnake; it appears to have been originally painted with various colors, which were rendered vivid and distinct when discovered, by washing. At the town of Las Tamaulipas, a village supposed to be upon the site of one of the ancient cities, and situated near Tampico, two very perfect idols sculptured in basalt have been disinterred from the earth, together with several small figures, and imitations of weapons carved in bone;† and not far from this place, on the river Panuco, there is an ancient statue.‡ Still further up the Panuco, and near the Rancho of San Juan, an imperfect piece of sculpture has been seen, resembling the lion-figure-head of a ship, several more of which are reported to exist at an ancient city some few leagues distant, called Quar-a-lam. At the museum in the University at Mexico are various articles of sculpture, and among them is a variety of figures of the rattlesnake in basalt; they are in the same posture, namely, a compact coil, from which the head and rattle are somewhat elevated. With these are also a few mutilated figures of men and animals, and some fragments of little deities.§ In a private cabinet in the city of Mexico, is the statue of a female, which has been considered as the figure of an

* Humboldt varies slightly from this description.—*Hum. Res.* vol. ii.

† Lyon's *Journal of a Tour in Mexico, etc.*, 1828, vol. i. pp. 21, 28.

‡ *Ibid.* pp. 49, 85, 101.

§ *Ibid.* vol. ii. p. 109.

Aztec priestess. This is a basaltic statue representing a female in a sitting posture, and it is executed with finished accuracy. Humboldt has observed that the head-dress is remarkable for resembling the Egyptian veil or *calantica*, more particularly that style found upon the pillars of Tentyra, and that the back is similar to that of a bronze statue of Osiris in the museum at Velletri. The peculiar difference in the Mexican sculpture consists in a string of pearls, which encircles the forehead, and which is supposed to indicate a former commercial connection between Mexico and the Pearl Coast of California.*

A relief sculptured upon a hard black stone, and discovered near the town of Oaxaca, the ancient Huaxyacac, the capital of the Zapotecs, represents a warrior, who, as well as the other figures, is remarkable for a large nose, and a head-dress similar to those delineated upon the Mexican hieroglyphic paintings at Velletri. The warrior has two skulls at his girdle, and wears an apron of the jaguar skin, with its tail appended, the Mexican vest, long sleeves, and buskins. Two naked men are seated cross-legged at his feet.† Another idol executed in basalt, found in the valley of Mexico, is distinguished for the same Egyptian style of head-dress observed in the statue of the Aztec priestess before described.‡ Certain granite vases of beautiful form, disinterred upon the shores of Honduras, exhibit a great resemblance in their ornaments, to those described upon the walls of Mitlan.§

Fragments of obsidian generally abound in the neighborhood of the Mexican ruins. It is supposed that the quarry, from which this substance was obtained, is situated in the moun-

* Humboldt's Res. vol. i. p. 43.

† Ibid. vol. i. p. 130.

‡ Ibid. vol. i. p. 90.

§ Ibid. vol. i. p. 90.

tain of Los Pelados. On an adjacent mountain called "the Mountain of the Knives," pieces of obsidian, of the form of arrow-heads and knife-blades, which have been fractured by the ancient inhabitants for use, are found in great numbers.* The vein and the pits sunk for the working of the obsidian are on the summit of Los Pelados, but at the present day this quarry is nearly filled up. In the museum of the University at Mexico there is a large mask of obsidian, "well carved and proportioned, and exquisitely polished."

Earthenware. In the vicinity of the ruins which have been described, large quantities of fragments of earthenware are of constant occurrence, and many entire vessels have been found, which for exquisite workmanship and graceful design are exceedingly remarkable. The art of working in clay was not however confined to the construction of vessels only, but extended to the manufacture of other articles.

At Las Tamaulipas, idols in terra cotta have been dug up, representing not only the human face, but also the peculiar head-dress which was common among the former inhabitants of that district.† At the village of Panuco about forty miles above Tampico, on the river Panuco, these remains are numerous. Among them we find described, odd, grotesque looking figures and idols in terra cotta, vases, a little bird-shaped whistle of earthenware, having two holes on each side, so that a tune might be produced from it, and a very perfect earthen flute.‡ Indeed, the streets of Panuco are to this day strewn thickly with the remains of ancient crockery; and often, after heavy

* Lyon's Tour in Mexico, vol. ii. p. 143, 145.

† Ibid. vol. i. pp. 28, 100.

‡ Ibid. pp. 52, 53, 54.

rains, entire vessels and toys are found washed down the water courses." One of these vases is said to have been carved with those peculiar flourishes, introduced in the Mexican manuscripts, and another flute composed of a very compact red clay appeared to have been once polished, and painted. It had four holes, and the mouth part was in the form of a grotesque head. "Some of the vases yet retain their colors and vitreous glazing, and many are of an earth as light and well baked, as that of Tuscany; while the figures, from their singular attitudes and grotesque expression, might serve as models to the toy-makers of the present day. The flutes, single and double, with two, three or four holes, the oddly shaped pipes and whistles, and the jars modelled into birds, toads and other animals—all in terra cotta, exhibit as much humor as ingenuity, and are found, either entire or broken, in such quantities as to induce a belief that Panuco was actually a mart for crockery-ware." These figures, it may be remarked, to save repetition, bear the closest resemblance to those of other terra cottas, found in more distant provinces.

Hieroglyphical Paintings. It would be far beyond the scope of this brief notice, of some of the monuments of the southern portion of North America, to give a detailed view of the contents of those hieroglyphical paintings, which record nearly all that is left to us, of the ancient history and customs of the inhabitants of that territory. Though the number saved from the hands of the Spaniards is few, even these remnants are rich in minute descriptions of the annals, manners, religion, science and polity of the various nations.

Fragments of hieroglyphic manuscripts are preserved in libra-

ries at Berlin, Dresden, the Escorial, Vienna, Velletri, Rome, Bologna and Mexico.

One of those at Berlin, made after the Spanish conquest, contains the genealogy of the Princes of Azcapozalco,* a small district in the valley of Mexico. These kings claimed to be of Acolhuan descent, and of ancient and noble blood. From this picture two points may be gathered :

1st. That the dead are delineated, as having their feet wrapped up ; while the living are distinguished by small tongues placed near the mouth, and by having their feet at liberty.

2d. That the names of these princes are represented by hieroglyphics tied to the head ; these names were pronounced by the natives, upon observing the symbol. Attached to this manuscript is a curious description of a lawsuit : paintings of this kind, were used as statements of the claims of litigant parties, and left with the judge both as minutes of the evidence, and as records. Other paintings in the Berlin collection contain lists of tributes, detailed genealogies, and historical descriptions of the various migrations into New Spain. In some of them, the figure of the Aztec shield is worthy of notice, as being similar to some found upon Etruscan vases.†

Of the Codices Vaticanæ at Rome, which are mentioned by Acosta, one is thought to consist of ritual almanacs. Upon one of its pages we find an adoration entirely Hindoo in its character. It is made before a deity, by a human figure touching the ground with his right hand, and his mouth with the left.‡ In the other of these manuscripts shields are again depicted resembling the Etruscan ; and warriors contending with the net, very much

* Humboldt's Res., vol. i. p. 135. † Ibid. vol. ii. p. 89.

‡ Ibid. vol. i. p. 194.

after the manner of the Roman Retiarii. The princes are distinguished by a red ribbon tying the hair, the badge of nobles and heroes ; and the kings are exhibited with naked feet, as it was their custom always to be carried ; many of the figures wear beads or rosaries.*

The Mexican manuscripts seen by Humboldt, in the palace of the viceroy in the city of Mexico, represented the journeys of the Aztecs from the north, the construction of several cities, and the principal events of their wars.†

The Codex Borgianus of Velletri is the largest one in Italy, and contains a ritual and astrological almanac.‡ Among other curious figures, we find a priest wearing a remarkable helmet, resembling the trunk of an elephant ; and upon another page, the head of a priest sacrificing, covered with a pointed cap, the original of which occurs frequently in eastern Asia and on the north-west coast of America.

In the Vienna collection we find the targets and shields before referred to, and the outlines of temples.§ The human figures are generally distinguished by the absence of beard, large Roman noses, and the pointed form of the head, though there is often considerable variety in the features.||

* Humboldt's Res., vol. ii. p. 20. Vol. i. pp. 203, 204.

† Ibid. vol. i. p. 189. See also Clavigero, vol. i. p. 30.

‡ Humboldt's Res., vol. ii. pp. 36, 204, 211.

§ Robertson's Hist. Am., p. 365.

|| "This collection," says Dr. Robertson, who had accurate copies taken of them, "appears to have been a present from Emmanuel, King of Portugal, to Pope Clement VII., who died A. D. 1583. After passing through the hands of several illustrious proprietors, it fell into those of the Cardinal of Saxe-Eisenach, who presented it to the Emperor Leopold."—*History of America*, p. 365. Note.

The manuscript in the Escorial appears to contain a sacred or ritual calendar,* and shows the signs of the days and months, together with their astrological influences.

The Mendoza collection of paintings, which is probably now lost, was owned by Hakluyt and published by Purchas.† It was divided into three parts; the first giving the history of the Aztec dynasty of Mexico, from the foundation of that city to the death of Montezuma; the second, a list of the tributes paid by each town and province to the Emperor; and the third containing a view of Mexican manners and institutions, public and domestic.‡ Mexican temples are here delineated, usually of a pyramidal form, but occasionally constructed in another style. The pyramids are divided into steps or terraces, and have buildings upon their summits, where we find priests sitting, and watching the stars.

The Codex Mexicanus of Bologna§ relates, like that of the Escorial, to astronomy and religion; and that of Dresden exhibits strong indications of real hieroglyphics.

The copies at Paris, and those of Gemelli and Boturini,|| seem to be authentic, and are almost as valuable as originals;

* Robertson's Hist. Am., p. 366.

† This collection, made by Don Antonio Mendoza, the first bishop of Mexico, was sent as a present to Charles V. Falling into the hands of the French, they came into the possession of the geographer Thevenot, of whose heirs they were purchased by Hakluyt. It is said that a Mexican painting exists at Oxford, which may probably be a fragment of the collection of Purchas.—*Humboldt's Res.*, vol. i. p. 189.

‡ Clavigero, vol. i. p. 29. Robertson, p. 229. *Humboldt's Res.*, vol. i. pp. 180, 184, 186.

§ Clavigero, vol. i. p. 406. || Robertson, pp. 365, 229.

among them are the Mexican annals and migrations, chronological calculations, and tribute rolls.*

The material, upon which the paintings are depicted, is of two kinds;—those at Rome, Vienna, Velletri and Bologna are on stag-skins; others are formed upon the Maguey or Agave paper, made, like the Egyptian rolls of papyrus, by a transverse disposition of the fibres of the leaves, after being macerated in water.† Some specimens of Mexican paper are as thin as the Chinese; and others, such as the manuscripts of the Escorial, are of great thickness.‡ Many of the paintings have explanatory notes appended to them, in the Spanish or Mexican language, which are valuable as expositions contemporaneous with a period, when the picture writing was better understood than

* The copies of Gemelli were taken from the paintings in the collection of Sigüenza, which, at his death, passed into the hands of the Jesuits in Mexico. Boturini, who was ardently devoted to the study of Mexican history, formed a valuable museum, during his long residence in that country, in which were many of these paintings. When he unfortunately became an object of suspicion to the Spanish government his manuscripts were seized; some of them were lost by the capture of the vessel in which they were sent to Europe. Some came into the possession of the Archbishop of Toledo, a portion of which was published; and probably most of the remainder have perished, excepting a few still left in the city of Mexico.—*Clarigero*, vol. i. p. 30. A copy of one, representing the Mexican migrations, has recently been published by Mr. Delafield.

† Humboldt's Political Essay, vol. ii. p. 375.

‡ Waldeck, who thinks that many of the manuscripts have been fabricated or forged, says that those painted before the arrival of the Spaniards may be distinguished by the thickness of the paper.—*Voyage Pittoresque*, p. 46.

at present. The volumes were not separated into leaves, nor formed into rolls, but were folded up in a zig-zag manner, like the Siamese manuscripts.* The pictorial part of the manuscripts, exhibits forms which betray very little skill in delineation, and less elegance and taste in design, but it has been justly remarked, that the principal forms have doubtless been early fixed, and as their sole purpose was the conveyance of ideas, there existed a strong necessity for adhering to the original figures; any change being productive of much more confusion than would be produced by an alteration of the alphabet, or of the grammatical construction of our own language. The human forms are usually dwarfish and with large heads, like those on the Etruscan reliefs, and the heads are always represented in profile: among them, grotesque and hideous figures continually occur, reminding us of the Hindoo representations of deities.†

It has been insisted that the Mexicans possessed no hieroglyphics. Without entering at this time into the discussion, it may be observed here, that the picture writings separately considered, cannot of course be considered as hieroglyphics—for representing individual and particular occurrences, they were widely different from that system of communication, which possesses the power of indicating general ideas by symbolic signs. In the manuscripts, however, we find figures which have been arbitrarily chosen to indicate certain objects, and others which are real hieroglyphics representing the elements, the relations of number, time, and place, and proper names.

* Humboldt's Res., vol. i. p. 163.

† Ibid. vol. 1. 165, etc.

It will be perceived, that in these brief notices of the most remarkable ruins in this portion of the continent, such detailed and minute descriptions, as are afforded by the sources from whence they have been taken, have been avoided. The object has been, to embrace a general view of their style, character, numbers, and local position, so as to lay the basis of a general comparison of all the American monuments—and not to attempt a particular and circumstantial description; which, to be understood, should be accompanied with pictorial illustrations. Among those omitted, are numerous designs, ornaments in stucco, sculptures and hieroglyphics, to which a verbal delineation could by no possibility render justice;—allusion will be made to these, however, whenever they become important in shedding any light upon the history of their authors, and it will be seen that some of them are valuable evidences, in the solution of various interesting questions involved in the present investigation. Before passing to a view of the other ancient American monuments, it may be useful to inquire, what conclusions may be drawn from those just examined.

Their Antiquity. Though all of these ruins are at this time deserted, it is by no means just to suppose that they are the relics of a people now become extinct. When this country was invaded by the Spanish conquerors, as has already been observed, it was, like Peru, occupied by a polished and cultivated race. Many of its cities were then large and flourishing, and inhabited by a numerous population. Their magnificent palaces were still the residences of princes, and the temples still devoted to their original sacred uses. The arts were in a high state of advancement—science was cultivated—religion well

established, and powerful governments in firm and substantial existence. It may accordingly be maintained, beyond the fear of contradiction, that some of these structures, or in any event, similar ones, were erected by the ancestors of the present Indian tribes occupying that region. But as might be naturally inferred, and as is clearly proved by traditional and other testimony, these nations had not escaped the ordinary lot of human affairs, but had been subjected to all the consequences of invasions, wars, and revolutions, through the long period which had elapsed since their first settlement here, to the time of the discovery ; and consequently, as we must assign different dates to the origin of these cities respectively, it is probable, and in some cases almost certain, that many of them were already deserted and left to decay when the Spaniards first arrived, while others were still inhabited. We are informed that when Cortez entered Mexico, the great Teocalli of that city had been but recently erected—and we are also told that it was built after the model of the pyramids, constructed by the Toltecs—a people to whom were ascribed, as was the custom in the absence of any definite testimony, all such edifices as were manifestly of great antiquity. The pyramids of Teotihuacan and Cholula were said to be of Toltecan origin—and the latter is associated with some of the oldest Mexican religious traditions. These pyramids then were the models for subsequent imitation ; but by common consent it is acknowledged, that the era of the arrival of the Toltecs in Mexico, as pointed out by the Mexican hieroglyphic manuscripts, was as far back as the seventh century. We have therefore the testimony of the Mexicans themselves, that some of those edifices proceeded from a nation who

had occupied that country, before the Aztec tribes, at a very early period,—and it will be seen hereafter, from other evidences, that their antiquity may be carried back still further.

2. *Their general resemblance.* It is impossible to survey the remains of the monuments of these ancient nations, without perceiving, however much they may vary in minor details, that they proceeded from branches of the same great race; and for this reason all these ruins have been embraced in one general view, without distinction of authorship. A strict and particular analogy it would be unphilosophical to expect; for, notwithstanding the common origin of their authors, they had been separated, probably for many ages, into distinct societies and governments; but yet, from Zacatecas in the north, to Guatemala and Yucatan in the south and east, we can trace certain leading and marked characteristics in the productions of the arts, which tend to give them a general similitude in style and appearance.

One of the most common indications of this uniformity, is the presence of enormous pyramids; and when these are absent, or are not to be discerned in the form of perfect pyramids, the same species of structure may be observed in immense pyramidal terraces, which served as the bases of more finished and elaborate buildings,—and this too at widely separated points, for the edifices at Zacatecas bear a striking similarity to those situated at the south of Mexico. Large quadrangles and courts surrounded by buildings—walls covered with cement and paintings—the employment of the Cyclopean arch—extensive aqueducts, broad and paved roads or causeways—the style of sculpture—the peculiar form of the figures in the religious or mythological representations, common even to the Mexican

manuscripts—the evidences of similar astronomical systems, and the use of the same system of hieroglyphics, all indicate a decided analogy in the arts, customs and institutions of these nations. This topic, however, will receive more deliberate attention hereafter; and in the mean time let us proceed to the examination of the aboriginal monuments in South America.

CHAPTER VI.

ANTIQUITIES IN SOUTH AMERICA.

SOUTH AMERICA, at the discovery, presented in the character and condition of its inhabitants, an appearance very similar to that exhibited in the northern continent. Over the greater portion, were scattered numerous families of the Red race, elevated in no respect above a state of barbarism, though still preserving some feeble traces of a lost civilization, in their customs and traditions. All these tribes appeared to be of the same stock, and to be characterized by the same physical and social peculiarities as the North American Indians. In the remaining part, there were several nations which were justly entitled to be considered, at least, as semi-civilized; and among these the Peruvians were pre-eminent. Under the guidance of their enterprising sovereigns, in a career of conquest steadfastly pursued for more than four hundred years, they had subjugated, and retained under their permanent dominion, neighboring tribes and kingdoms, until their empire comprehended northern Chile on the south, and the kingdom of Quito on the north, and extended from the Pacific on the west, to the easterly Cordilleras of the Andes.* Civilization, however, was not confined within these limits: Chile, into which country the restless and

* Garcillasso de la Vega, vol. p. 16. Humboldt's Personal Narrative, vol. v. pp. 85, 86. Humboldt's Res., vol. i. p. 177. Yupanqui, the tenth Inca, was compelled to desist from a further prosecution of

ambitious Incas had penetrated with their armies, and the northern portion of which they appear to have conquered, was occupied by various tribes far advanced above the savage state; and to the north and north-east of the kingdom of Quito, there were nations, whose attainments in the arts were second only to those of the Peruvians. Of the history of these civilized races we have no knowledge, save such as may be gathered from their traditions, or from the Peruvian chronicles,—and the latter are of too suspicious a character for implicit reliance, particularly when they relate to the customs, institutions and condition of those tribes which they conquered, previous to their subjugation. But the ancient remains still visible throughout this territory, after the lapse of so many centuries, afford data for comparison with the monuments of other aboriginal nations, and for important conclusions as to the origin and the migrations of their authors.

Mounds. Earthen mounds are found in Colombia, Peru and Chile, similar to those of North America, and like them, containing the bones of the dead, besides articles which disclose to us many proofs of the degree of civilization attained by their builders. The plains of Varinas, about north Latitude 7°, exhibit some of these monuments, consisting of artificial conical hills, which are found between Mijagual, and the Cano de la Hacha.

Over the greater part of the country, formerly comprised under the government of the Incas, tumuli are of frequent oc-

the conquest of Chile, by the valorous resistance of the Purumanco Indians, after having successfully carried his arms as far as the river Mauli, in lat. S. 34° 30'. *Ulloa's Voyage*, vol. ii. p. 266. *Molina's History of Chili*, vol. ii. p. 10.

currence; they are called *Huacas*, by the natives, and being sepulchres, have also been made the depositories, according to the aboriginal custom, of much of the riches and treasure of the deceased. Some of them contain galleries, built of stone or brick, and communicating with each other.* The method of forming these mounds appears to have consisted in depositing the body of the dead, without interment, in the place where it was to rest, surrounding it with a tomb of stones and bricks, and then throwing earth upon it until the *Guaca* had attained the desired elevation.† Their usual height is about from fifty to sixty feet, their length from one hundred and twenty to one hundred and fifty feet, and their breadth somewhat less, though there are some much larger; their form is generally oblong. One, about a mile and a half south of Lima, which contained some human skulls, is nearly two hundred feet high.‡ Ulloa observes, that “the remarkable difference in the magnitude of these monuments seems to indicate that the *Huacas* were always suitable to the character, dignity, or riches of the person interred.”

A few of these structures require, for the purposes of this investigation, a specific description. The *Paneñillo* of Callo, a few leagues to the south-west of Quito, is a hill composed of volcanic stone, supposed by some§ to be an artificial structure or tumulus, while the more reasonable opinion is, that it is a natural elevation, to which the natives have given a more regular form.|| Its shape is conical, and its height about two hun-

* Humboldt's Researches, vol. i. p. 192.

† Molina, vol. ii. p. 81. Ulloa, vol. i. p. 492.

‡ Morton's *Crania Americana*, p. 226. § Ulloa, and the Natives.

|| Humboldt's Researches, vol. ii. pp. 3, 4.

dred and sixty feet, an altitude not much exceeding that of the mounds at Mansiche.*

Near Santa, in Peru, is a mound in which were found vessels of baked clay, "of fine workmanship and ingenious construction," and a human body interred in a *sitting posture*.† The *Huacas* at Lambayeque are about thirty feet high, one hundred and sixty feet square, and of a pyramidal shape, and in the interior of one of them is a wall made of adobes of different sizes.‡

In Chile we sometimes find tumuli composed of stones. Upon opening one of these, on the mountains of Arauco, an urn of extraordinary size was discovered at the bottom.§

The most curious and interesting structure of this character, interesting from its similarity to those terraced pyramids of the United States and Mexico, which have been described, existed in that locality which appears to have been the centre of South American civilization. To the east of Lake Titicaca, in the province of Callao, and upon the elevated plain of Tiahuanaco, are the remains of the most ancient edifices of the southern continent. Here, at the time of the conquest of this territory by Mayta Capac, the fourth Inca, was the city of Tiahuanaco, remarkable for its great and magnificent edifices. The most striking of these, says Garcillasso de la Vega, was a hill or mound erected by the hand of man, and of almost incredible height. The Indians, remarks this author, who seem to have wished to imitate nature in this structure, had placed for its foundation immense

* Ulloa says that its height is from one hundred and fifty to one hundred and eighty feet, vol. i. p. 500.

† Morton's *Crania*, p. 225.

‡ Ruschenberger's *Three Years in the Pacific*, p. 400.

§ Molina's *Hist. Chile*, vol. i. p. 21.

masses of stone cemented together, which were surmounted by prodigious terraces raised one above another; but the design of this marvellous building is unknown.*

It appears most probable, that the bodies of deceased chieftains, and other persons of consequence, were buried in the mounds or *huacas*, and that those of ordinary individuals were deposited in common graves. Many of these bodies appear to have undergone the process of embalming, as was the case, according to Garcillasso de la Vega, with the remains of the Incas; others, on the contrary, have been buried without any artificial means used for their preservation, and yet, in consequence of the antiseptic qualities of the soil and climate, they present, externally, the appearance of mummies regularly embalmed. At Callao, M. Poepig observes, "such is the extreme aridity of the soil, that, after the lapse of three centuries, we still find the mummies of the ancient Peruvians in a state of perfect preservation. They were interred in a *sitting posture*."† Mr. Stevenson also remarks, that the bodies found in the *huacas*, owing to the nitrous qualities of the earth, are well preserved.‡

About a mile from the town of Arica§ is an extensive cemetery, situated upon the side of a hill. The graves are indicated by hillocks of upturned sand, and human bones with the dry flesh still adhering, scattered over the surface. They may be discovered by the hollow sound, consequent upon stamping on the ground where they are. "The surface is covered over with sand, an inch or two deep; which being removed discovers a stratum of salt, three or four inches in thickness, that spreads

* Garcillasso de la Vega, vol. i: pp. 126, 128.

† Travels cited in F. Q. Rev. Am. Edit. vol. 3. p. 17.

‡ Vol. i. p. 415.

§ Frezier, pp. 172, 177.

all over the hill. Immediately beneath are found the bodies in graves or holes, not more than three feet in depth. The body was placed in a *squatting posture*, with the knees drawn up, and the hands applied to the sides of the head. The whole was enveloped in a coarse but close fabric, with stripes of red, which has withstood wonderfully the destroying effects of ages, for these interments were made before the conquest, though at what period is not known. A cord was passed about the neck on the outside of the covering, and in one case we found deposited upon the breast a small bag containing five little sticks, about two and a half inches long, tied in a bundle." "Several of the bodies which we exhumed were in a perfect state of preservation. We found the brain dwindled to a crumbling mass, about the size of a hen's egg, perhaps adipocere. The cavity of the chest was nearly empty, and the heart contained what seemed to be indurated blood, which cut with as much facility as rich cheese. The muscles were like hard smoked beef."* The same author describes the graves at Santa, Santa Bay, south latitude eight degrees fifty-two minutes, as resembling those of Arica, but some of them apparently constructed with more care, being chambers about six feet deep and four in length, walled up on the sides with adobes.†

Some of the present natives set apart the middle of their houses, for the interment of the dead.‡ Mr. Stevenson says, that at Supe he was convinced, that the Indians buried their dead in their houses where they had resided, as he had dug up many of them;§ and it is probable that many places, now supposed to

* Ruschenberger, pp. 340-1.

† Ibid. p. 374. ‡ Smyth's Narrative, pp. 182, 216. § Stevenson, vol. i. p. 413.

have been only cemeteries, were the immediate sites of towns.

Further to the north, the graves of the higher ranks appear to be similar to those just described. On the edge of the conical summit in which the lake of Guatavita is situated, Captain Cochrane saw two of the sepulchres of the caciques, hewn in the sandstone, and remarked that the burial-places of the chiefs had always been chosen on commanding summits overlooking the plains, and that they were generally interred singly; whereas the lower class were buried in large caverns formed for that purpose, some hundreds of feet below.* He thus describes one of these tombs opened by him: "The spot was indicated by a small hollow appearance in the ground. After removing about a foot of earth and turf, we came to an amazingly large stone, about twelve feet long, eight wide, and nine inches thick—it was a kind of sandstone; this we were obliged to break, and with great difficulty removed, when in two pieces. It had rested on

* Cochrane's Travels, vol. ii. p. 253, etc.

The cave of Ataruipe, on the eastern bank of the Orinoco, has been the sepulchre of some extinct tribe. Six hundred skeletons were found in it, well preserved, and regularly arranged in baskets. The bodies had been doubled or bent together. The bones were entire, and some of them had been whitened in the sun, some dyed red with anoto, and others varnished, like mummies, with odoriferous resins. Earthen vases, half baked, were placed by the sides of the baskets, and also contained bones; some of them were three feet high, and five and a half long. They were oval in shape, of a greenish gray color, the handles modelled in the form of crocodiles and serpents, and their bodies ornamented with meanders and *grecques*. To the north of the Cataracts of the Orinoco are other caverns filled with human bones.—*Humboldt's Pers. Nar.*, vol. v. pp. 517, 627.

a shelf piece all round; the grave was formed in sandstone. We at first came to earth, and then to finely variegated sand, rammed down so hard as to appear almost an integral part of the sandstone, but manifestly different, as it crumbled to fine dust when once broken out, whereas the natural strata adhere firmly together. After digging down for about eight feet, we came to earthenware of a rough description and rudely painted, some of which had been used for water,—others for cooking utensils, from the evident marks of fire on them; the whole contained nothing but sand. At about fourteen feet depth we met with some human bones—the thigh and arm pieces—but no skull or teeth; and after continuing our labor to the depth of thirty feet, we reached the original native strata.”

There was yet another kind of tomb used by the ancient Indians, which is alluded to by Frezier. “There is much difference,” he says, “between these voluntary tombs and those they erected for men of note. The latter are above the ground, built with unburnt bricks, and round like little pigeon-houses, five or six feet in diameter, and twelve or fourteen in height, arched like the top of an oven—in which the dead were placed *sitting*, and then they were walled up.”* Numerous sepulchres of this character, but composed of stone, have been observed between Andamarca and Tacua. They were of an oblong form and from ten to fifteen feet high; and they appear, for some distance, in every direction as far as the eye can reach.† “On an immense plain,” says Mr. Temple, “bounded on my left by the Cordilleras, I passed a row of ancient mud-built structures, which at a distance had the appearance of Martello

* Frezier, pp. 177, 178.

† Andrews’ Travels in South America, vol. ii. p. 147.

towers. They are said to have been the sepulchres of Indian chiefs before the conquest; the walls of some of them were nearly perfect, which may convey an idea of the durability of the adobes—a sun-dried compost of mud and strong grass—with which they are constructed; having stood for centuries, without any symptoms of decay from the injuries of time or weather. The only aperture in the walls is a very small doorway, made low, in order, it is recorded, that the abode might never be entered but in the posture of humility and veneration.”*

Upon opening the mounds and graves, they are found to contain a great variety of implements and other articles, of gold, copper, stone and earth,—gold utensils, looking-glasses of stone, and human skeletons. Some of the earthenware vessels exhumed from them are exceedingly curious. One kind is composed of two hollow spheres, each about three inches in diameter—connected by a small tube placed in the centre, and by a hollow arched handle above, having a hole on the upper side. “If water be poured into this hole,” says Mr. Stevenson, “until the jar is about half full, and the jar be then inclined, first to one side and then to the other, a whistling noise is produced. Sometimes a figure of a man stands on each jar, and the water is poured down an opening in its head, and by the same means the noise is occasioned. I saw one of these at the Carmelite nunnery at Quito, having two Indians upon it, carrying a corpse on their shoulders, laid on a hollow bier resembling a butcher’s tray; when the jar was inclined backwards and forwards, a plaintive cry was heard, resembling that made by the Indians at a funeral. The jars and other

* Temple’s Travels in Peru, vol. ii. p. 43.

utensils were of good clay, and well baked ; which, with the ingenious construction just alluded to, proves that the Indians were acquainted with the art of pottery.”* Ulloa describes the drinking-vessels as being generally constructed from a fine black or red earth, usually of a round shape, with a handle in the middle, the mouth on one side, and on the other the head of an Indian, with the features naturally expressed. Besides these, there were many larger vessels.†

The axes disinterred from the *huacas* differ little in shape from ours, and are composed, some of copper,‡ and some of the gallinazo stone: spear-heads of the latter substance are also met with, and heads of the maize, carved in stone with much delicacy and beauty. From the tombs at Manta and Acatames have been obtained emeralds cut into various shapes, with ac-

* Stevenson, vol. i. p. 413. Frezier, 274.

† Ulloa, vol. i. pp. 495, 496.

The art of pottery is still practised by the natives of Peru and Chile. “I have seen some jars from Melipilla and Penco, which, for shape and workmanship, might pass for Etruscan. They are sometimes sold for as high prices as fifty dollars, and are used for holding water. They are ornamented with streaks, and various patterns in white and red clay where the ground is black, and where it is red or brown, with black and white. Some of the red jars have these ornaments of a shining substance, that looks like gold dust, which is, I believe, clay having pyrites of iron; and many have grotesque heads, with imitations of human arms for handles, and ornaments indented on them. But excepting in the forming of the heads and arms, I do not recollect any Chileno vase with raised decorations.” “On the Peruvian vases procured from the tombs, there are many and various patterns in relief, but I have not seen any modern Peruvian pottery.” —*Graham's Chile*, p. 142. See also Ulloa, vol. i. p. 324.

‡ Molina, vol. ii. p. 21.

curate precision—some being spherical, others cylindrical or conical, and most of them perforated diametrically or otherwise.

Among the gold relics are nose-jewels, ear-pendants, collars, bracelets and idols. The latter have a construction peculiar to the Peruvian workmanship. They are of full length, of one piece, hollow within, extremely thin, and there are no vestiges of soldering. Dr. Meyen, who examined some of these articles in the museum at Lima, says, "The collection of Peruvian idols of gold and copper is very remarkable." "These figures are very curious, for they have not been cast in the mould, but formed with the hammer."*

From one of the *huacas* of Chimu a relic, of a similar description, was exhumed. Ruschenberger describes it as "a fore-arm and hand of gold." "It was about six inches long, hollow, without any seam, and had three holes on one side, and a single one opposite, like those in the joint of a flageolet, and it was supposed to have been used as a musical instrument."†

The mirrors alluded to as discovered in these cemeteries are of two kinds—one composed of the Inca stone, a soft opaque mineral, and the other of the gallinazo stone (obsidian), which is hard, brittle and black. They are generally circular in their

* Meyen's Voyage.

† Ruschenberger, p. 382.

As might be anticipated from the general use of some of the metals, particularly gold and silver, many of the mines in Peru present undoubted signs of having been extensively worked in the times of the Incas.—*Ulloa*, vol. i. pp. 27, 486; vol. ii. pp. 153, 164. An idea of the vast amount of treasure contained in some of the mounds, may be obtained from the fact, that in the year 1576, a Spaniard opened a *huaca*, in which he found so large a quantity of gold, that

shape, from three inches to a foot and a half in diameter, highly polished, and some are plane, some concave, and others convex.* In the mounds of Chile, besides earthenware, vases of marble have been found, some of them cut and polished with the greatest perfection; and also axes of basalt, and occasionally edged tools of hardened copper.†

There are also found in the *huacas* and graves, ostrich feathers from the plains of Buenos Ayres; spades, lances, clubs and other implements of palm wood; marine shells; dresses of woollen and cotton cloths; small images appareled in garments similar to those now worn by the Indians; small pieces of gold in the mouths of the dead; slips of silver; rings and small cups of gold; quantities of maize; seeds of the gourd; beds or strata of banana leaves; the bean and quinoa deposited in vases; and mills used to grind the maize.‡ These mills consist of a large stone somewhat hollowed in the middle, and a handle, curved on one side, which was used by pressing the ends alternately upon the large stone.§ Similar articles are found in the mines worked by the ancient Indians, where they were probably em-

the royal fifth paid into the treasury of Truxillo, amounted to 9362 oz. the value of the whole being upwards of one hundred and fifty thousand pounds sterling.—*Stevenson*, vol. ii. p. 121. It is stated in the "Diario de Lima" for 1791, that from the year 1550 to 1590, the king's fifth amounted to nearly one hundredthous and Castellanos of gold, worth about two hundred thousand dollars.—*Ruschenberger's Three Years in the Pacific*, p. 400.

* Ulloa, vol. i. p. 495.

† Molina, vol. i. p. 21.

‡ Stevenson, vol. i. pp. 414, 415, 166, 332, 366, 46.

§ The mills used in Chile for grinding maize resemble these.—*Frezier's Voyage*, p. 67.

ployed in pulverizing the ores.* Chica, an intoxicating beverage prepared from the maize, is also found in the *huacas*, preserved in jars. The cotton cloths are often of a very fine texture, ornamented with curious figures interwoven, and dyed with indigo and other colors.†

Agriculture and Aqueducts. The Peruvians and some of the neighboring nations carried the cultivation of the soil to a higher stage of perfection, than any of the American nations. They were acquainted with the use of manures, and surrounded their fields with fences, or walls of clay, sometimes faced with stone, the vestiges of which are still visible.‡ We still perceive the indications of an agricultural population, in the remains of the granaries, in which the maize was collected and stored. These repositories are somewhat similar to a cistern, and are usually walled around, either with roughly hewn stones or with adobes. Their depth beneath the surface of the earth is commonly about four feet, and the grain still found in them is generally entire and sound when taken out.§

In consequence of the narrow extent of land intervening between the mountains and the sea, the rivers in this region are usually of small size, and the soil, being arid and sandy, needs the aid of artificial irrigation. Near Pisco, in a barren country, are ancient pits or excavations, made in search of humidity, wherein they planted the maize.|| To such an extent did they carry their ingenious efforts, that the sides of the steepest moun-

* Stevenson, vol. i. p. 369.

† Ibid. vol. i. p. 372. Ibid. vol. i. pp. 387, 415; vol. ii. p. 7.

‡ Molina, vol. ii. pp. 14, 19.

§ Stevenson, vol. ii. pp. 138, 174; vol. i. pp. 166, 374. Garcillasso de la Vega, vol. ii. p. 177. || Stevenson, vol. i. p. 359; vol. ii. p. 6.

tains were converted into productive fields, by being encircled with terraces, supported by stone walls, and watered by canals.* "Upon the sides of some of the mountains," observes Mr. Temple, "were the remains of walls built in regular stages round them, from their base to their summits, forming terraces on which, or between which, the Indians, in days of yore, cultivated their crops."† Frezier says the Indians were very industrious in conveying the waters of the rivers through their fields and to their dwellings, and that there were still to be seen in many places, aqueducts formed of earth and stone, and carried along the sides of hills with great labor and ingenuity.‡ Humboldt saw the remains of walls in the maritime part of Peru, along which water had been conducted for a space of from three to four miles, from the foot of the Cordilleras to the coast.§ "I have had various opportunities," says a more recent traveller, "of closely examining one of these canals, which is formed at the source of the river Sana, on the right bank, and extends along a distance of fifteen leagues, without reckoning sinuosities, and which consequently supplied a vast population; particularly one city, whose ruins still remain in the vicinity of a farm now called Cojal."|| These aqueducts were often of great magnitude, executed with much skill, patience and ingenuity, and were boldly carried along the most precipitous mountains, frequently to the distance of fifteen or twenty leagues.¶ Many of

* Mercurio Peruano, vol. v. p. 257. Vega, vol. i. p. 219.

† Temple's Travels in Peru, vol. ii. p. 39. ‡ Frezier, p. 262.

§ Humboldt's Political Essay, vol. ii. p. 31.

|| Vide Foreign Quarterly Review, vol. xix. p. 254.

¶ Ulloa, vol. ii. p. 28. Robertson's Hist. Am., p. 238. Vega, vol. i. p. 219.

them consisted of two conduits, a short distance apart; the larger of these was for general use; the other and smaller, to supply the inhabitants and water the fields, while the first was cleansing:* a circumstance in which they bear a striking resemblance to those of Mexico. They also conveyed water to the most distant places by subterranean conduits: Garcillasso describes five fountains that existed in the Temple of the Sun at Cuzco, and which were used for sacred purposes, one of which he saw flowing,—the others having become dry. It is probably one of these fountains which now supplies the *Hospital de Naturales*; its pipes are buried under the earth and cannot be traced, and, as in the time of the Peruvian historian, its source is unknown.† At Lanasca there is also a fountain, supplied through subterranean conduits, the source of which has never been traced.‡ Many of these great works became useless after the conquest, from their very magnificence, for their pipes, being made of gold,§ excited the cupidity of the avaricious Spaniards; and others were destroyed from mere wantonness. By their ruin, however, an idea may be gathered, of the extent and character of the natural obstacles against which the natives had struggled in their attempts to till the soil; for some districts, which once were rich, fertile and productive, are now sandy and arid wastes, supporting but a scanty population.

This sketch of the public works constructed for the encouragement of agriculture may be concluded by offering two instances, one in Peru and the other in Chile, which, in design and execution, are worthy of modern art. Near Caxamarca is a small lake hemmed in by mountains, which is connected

* For. Q. Rev., vol. xix. p. 254.

† Garcillasso, vol. i. p. 173.

‡ Mercurio Peruano, vol. v. p. 257.

§ Ibid.

with a river running on the opposite side of the ridge, by an excavation or tunnel cut through the mountain; so that the lake, when rising above its proper level, is prevented from flooding the adjacent lands.* The Salta de Agua, in the vicinity of Santiago, is formed by an artificial aqueduct, cut for the purpose of drawing off a portion of the waters of the river Mapocho, to irrigate the land of the lower plain. For the accomplishment of this object, "they cut channels through the granite rock from the Mapocho to the edge of the precipice, and made use of the natural fall of the ground, to throw a considerable stream from the river into the vale below. This is divided into numerous channels, as is required, and the land so watered is some of the most productive in the neighborhood of the city."†

Roads. Few of the monuments of the American nations have been viewed with more curiosity and interest, than those great public roads, which, ages ago, when these signs of civilization were yet wanting in the greater part of Europe, were constructed with such skill and science, such perseverance and boldness, as to rank them with the proudest remains, of that character, on the soil of the old world. These works were of great extent, enormous masses of stone were usually quarried, and employed in their formation,‡ and they were prosecuted with such indefatigable patience and labor, as to triumph over the most formidable natural obstacles. In South America they were not, however, confined to Peru, but their vestiges are still to be discovered, in remote regions, whither the power of the Incas never extended. They form one of the characteristic

* Stevenson, vol. ii. p. 174.

† Graham's Chile, pp. 212, 213, 214. Molina, vol. ii. p. 14.

‡ Humboldt's Res., vol. i. p. 260.

signs of all American civilization, and are far from owing their origin to the enterprise and ingenuity of the Peruvian sovereigns alone,—monarchs who were nevertheless ready to adopt, imitate, and reproduce upon an enlarged scale, the inventions they found existing, when they established their extensive empire.

The rank the Peruvian roads occupy, as finished structures, when compared with the ancient roads of Europe, is clearly shown by the testimony of one who had examined both. "We were surprised," says Humboldt, "to find at this place (Assuay), and at heights which greatly surpass the top of the Peak of Teneriffe, the magnificent remains of a road constructed by the Incas of Peru. This causeway, lined with freestone, may be compared to the finest Roman roads I have seen, in Italy, France or Spain. It is perfectly straight, and keeps the same direction for six or eight thousand metres. We observed the continuation of this road near Caxamarca, one hundred and twenty leagues to the south of Assuay, and it is believed in the country that it led as far as the city of Cuzco."* This was one of the celebrated roads, said to have been built by the Incas from Cuzco to Quito, a distance of five hundred leagues, and whereon, we are told, news could be communicated by the *chasqui*, or courier, from one of those cities to the other, in the space of six days.† For the accommodation of these couriers, houses were erected at short distances; and as soon as a message or intelligence was received, it was communicated from the one

* Humboldt's Res., vol. i. p. 241. Stevenson, vol. ii. p. 65.

† Vega, vol. i. p. 291. Adair gives an instance of a Chickasaw Indian, who ran three hundred miles, in a day and a half and two nights.—*Hist. Indians*, p. 396.

who had just arrived to another, who hastened on rapidly to the next post.

One of these great roads passed through the plains near the sea, and the other over the mountains in the interior. Augustin de Carate says, that for the construction of the road over the mountains, they were compelled to cut away rocks, and to fill up chasms, often from ninety to one hundred and twenty feet deep, and that when it was first made, it was so plain and level, that a carriage might easily pass over it; and of the other, which pursued a less difficult route, that it was forty feet wide, and as it was carried through valleys, in order to avoid the trouble of rising and descending, it was constructed upon a high embankment of earth.* Pedro de Cieça de Leon, one of the conquerors, speaks also of the former, as a magnificent and extraordinary work, both with respect to the buildings and magazines which were constructed along its borders, and to the labor which must have been employed in its erection;† and other authors describe it in still more glowing terms.

It has been intimated, that the remains of these ancient roads in South America, are not confined to Peru. The most northerly ruins of this kind, yet discovered, are to be seen upon the plains of Varinas about N. Lat. 7°. A fine road is to be perceived, between Varinas and Canagua; it is a causeway of earth fifteen feet high, and about fifteen miles in length, and

* The causeway built by Shah Abbas the Great, from Keskar to Astrabad, extended three hundred English miles, was twenty yards broad, and was raised in the middle, with ditches on each side.—*Hanway's Travels*.

† Vega, vpl. i. pp. 492, 493.

crosses a level, subject to inundation.* Captain Cochrane observed the remains of an ancient road in Colombia,† near the lake of Guatavita; and at the extreme of civilization on the south, we also meet with the vestiges of another. The Jesuit Imonsff, in a letter written A. D. 1716, and cited by Don Luis de La Cruz in the account of his expedition across the Pampas, speaks of a road on the south-eastern frontier of Chile “which passes to the other side of the Cordilleras, so much esteemed by the Indians for its excellence, and constructed by the ancient inhabitants.”‡

Baths and religious ablutions. At Cuzco are the remains of baths; and near Diezmo we find similar evidences of the habits of ablution of the ancient sovereigns. This bath is formed from a spring of good water, surrounded by a few stones, put together in the form of a chair, and at the bottom there is a hole, shaped something like a foot.§

Caxamarca was once distinguished for its royal baths, which also exist to this day. Two stone buildings having convenient rooms, each contain in their interior, an extensive bathing place; one of these baths is five yards square, and two deep. The sides and bottom are formed of roughly hewn stone, and there are steps leading down to the bath from doors, which open into the adjoining apartments.|| Similar baths are found near the village of Banos, in Huamalies.¶

* Humboldt's Personal Narrative. Stevenson's Twenty Years in S. Am., vol. ii. p. 99. † Cochrane's Travels, vol. ii. p. 206.

‡ El Mercurio Chileno, No. vii. p. 321.

§ Smyth's Narrative, p. 33.

|| Stevenson's Twenty Years in S. Am., vol. ii. p. 138.

¶ Ibid. vol. ii. p. 100. Mercurio Peruano, vol. v. p. 259.

The lake of Titicaca was the most sacred spot in all Peru, and is mentioned in some of the most ancient religious traditions. It was customary for the natives of all the provinces subdued by the Incas, to make annual pilgrimages to the Temple of the Sun, which was built upon one of the islands of the lake, and to bring with them offerings of gold and silver and precious stones,* and there is reason to believe, to bathe in the holy waters. The island where, according to tradition, Manco Capac first received his divine commission, was formerly a mountain, and was afterwards levelled by the Incas. "Here the first Inca appeared, and here also was a magnificent temple of the sun, containing an immense collection of riches, which, to save from the rapacity of the Spaniards, the Indians are reported to have thrown into the lake."†

The Lake of Guatavita, in Colombia, situated in a wild and solitary spot on the ridge of the mountains of Zipaquirá, is also supposed to have been held in great veneration by the ancient inhabitants, who repaired thither to perform their religious ablutions; for which purpose there was a staircase descending to the water, the remains of which are still existing. Beneath its waters, as the tradition runs, are buried immense treasures, which the natives are said to have thrown into the lake, on the arrival of the Spaniards; and a golden image has been recently recovered from it, which is thought to resemble the objects of Hindoo worship.‡

* Vega, vol. i. p. 176. † Ulloa, vol. ii. p. 166, etc.

‡ Humboldt's Pers. Nar., vol. v. p. 814. Mod. Trav. Colombia, p. 333. The graves which have been opened in the vicinity of the lake, contain little else but earthenware, for which reason it has been conjectured that on the decease of an Indian, his riches were

Ruins of cities, edifices and fortresses. The most decided uniformity in style and method of construction, is observable in all the buildings and monuments of the civilized nations of South America ; and the evidences are clear, that all the more finished structures were formed upon the same plan, and most of them copied after the same original model. The natives of Tiahuanaco, remarks Garcillasso de la Vega,*—an author by no means inclined to disparage the subjects of his eulogy, the Incas,—say that all its buildings were constructed *before the time of the Incas*, who built the fortress of Cuzco in imitation of them. This report receives confirmation from the circumstance, that Tiahuanaco was adjacent to the sacred lake of Titicaca, where Manco Capac and Mama Oello, were said to have been placed by the Sun, their parent. When they founded Cuzco, the chief city of their new empire, it is natural to suppose, that its edifices were erected after the fashion of those of Tiahuanaco, and we are assured that the buildings of Cuzco became the models of those subsequently constructed by the Incas, throughout their dominions.

Of the structures at Tiahuanaco only vague descriptions exist, but sufficient has been communicated to indicate their grandeur, and massiveness. Garcillasso de la Vega speaks of a long wall, “of which the stones were so large that it was impossible to comprehend how men had sufficient power to

cast into the lake, as a tribute of respect to its sanctity, or in honor of the deity worshipped there. The Spaniards have endeavored, but unsuccessfully, to drain the lake ; from the soil on its banks, however, they have procured many valuable articles, sufficient to pay the government a quinta of one hundred and seventy thousand dollars.

* Vega, vol. i. p. 127.

transport them; for it is certain that there exist nowhere near this place, quarries nor rocks whence such large masses could have been taken: that there were also extraordinary buildings, some of which were remarkable for their great doorways or gates, cut out of an entire and single stone, and placed upon stones of an incredible size, some of which were thirty feet long, fifteen thick, and six high." The same author observes that these edifices appeared to have been left unfinished,* but there seems more reason to attribute their imperfect state to the effects of time and decay.

Pedro de Cieza, whom Garcillasso de la Vega seems to have followed, in his account of Tiahuanaco, confirms this statement. "Tiaguanico is not a very large town, but it is deserving of notice, on account of the great edifices which are still to be seen in it: near the principal of these, *is an artificial hill raised on a groundwork of stone*. Beyond this hill, are two stone idols resembling the human figure, and apparently formed by skilful artificers. They are of somewhat gigantic size, and appear clothed in long vestments differing from those now worn by the natives of these provinces, and their heads are also ornamented. Near these statues is an edifice, which on account of its antiquity, and the absence of letters, leaves us in ignorance of the people who constructed it;—and such indeed has been the lapse of time since its erection, that little remains but a well-built wall, which must have been there for ages; for the stones are very much worn and crumbled. In this place also there are stones so large and so overgrown, that our wonder is excited to comprehend how the power of man could have placed them

* Vega, vol. i. p. 127.

where we see them.* Many of these stones are variously wrought, and some having the form of men must have been their idols. Near the wall are many caves and excavations under the earth; but in another place more to the west, are other and greater monuments, consisting of large gateways and their hinges, platforms, and porches, each of a single stone." "What most surprised me, while engaged in examining and recording these things, was that the above enormous gateways were formed on other great masses of stone, some of which were thirty feet long, fifteen feet wide, and six feet thick. Nor can I conceive with what tools or instruments, those stones were hewn out, for it is obvious that before they were wrought and brought to perfection, they must have been vastly larger than we now see them. Before I proceed to a further account of Tiaguanico I must remark that this monument is the most ancient in Peru, for it is supposed that some of these structures were built long before the dominion of the Incas, and I have heard the Indians affirm, that these sovereigns constructed their great buildings in Cuzco, after the plan of the walls of Tiaguanico, and they add that the first Incas were accustomed to hold their court in this place." Diego d'Alcohaça, also cited by

* In some of the quarries, it is said, there remain stones much larger, and some of them more or less finished, according to the state they were in, on the news of the Spanish invasion. Near Cuzco is a quarry of the Incas', where may be seen more than two thousand blocks of stone, some of great size and left in an unfinished state: and near Cascas, in Caxamarca, is a great block, thirteen yards in length, and about one in thickness, besides another in a rough condition, ready to be worked, and similar in its dimensions to some of those at Tiahuanaco.—*Mercurio Peruano*, vol. v. p. 261.

Vega, adds that the natives believed, that these buildings were dedicated to the Creator of the Universe.*

Cuzco. The little that has been preserved of the ancient edifices at Cuzco, confirms the description of the style and size of the original buildings at Tiahuanaco, from which they are said to have been copied. Among these, we find the remains of a fortress upon a hill near the city, and also the ruins of the Temple of the Sun. Their walls, parts of which are still in perfect preservation, are built with stones of great magnitude; and though of a polyangular shape, of different dimensions, and laid without cement, they are fitted together with extreme nicety and precision. The stones seldom have less than from six to nine angles, and they are so closely and firmly joined, that the interstices almost escape detection.† Ulloa says, the design appears to have been to enclose the whole mountain with a prodigious wall, and that the interstices of the courses of stone were filled with smaller stones.‡ From the palaces of the Incas, and especially from the Temple of the Sun, there were subterranean passages, which led to the fortress, through which the kings and priests could flee with their treasures and idols, in case of an invasion. These were cut into the solid rock, and with such skill and ingenuity, and so

* Pedro de Cieça *Chronica del Peru*, cap. 105, cited in Morton's *Crania*, p. 100; also Acosta's *Hist.*, etc., l. 6, c. 14.

† The same peculiarity in the arrangement and joining of the stones, has been observed in the Peruvian dwellings.—*Mercurio Peruano*, vol. v. p. 263.

‡ *Mercurio Peruano*, vol. v. p. 259. Ulloa, vol. ii. p. 132, etc. *Mod. Trav. Peru*, vol. ii. p. 291. The city of Cuzco was said to have been founded about the year 1043.

admirably contrived, that there were particular places, in which one man could defend the passage against a hundred. The method adopted for this purpose, consisted in excavating the rock, in a zig-zag manner, with sharp angles or projections, at which points the passage was contracted, so as to leave space but for one person to pass at a time. These labyrinths were still observable, at the close of the last century, and it is said, the whole city was found to be undermined with them: * they appear to have been used also at other places, and are considered, as one of the peculiarities usually attending most of the Peruvian fortresses.

Cannar. In descending from the Paramo of Assuay towards the south, is the Inga-pilca, or the fortress of Cannar, crowning the summit of a hill. "This fortress," says Humboldt, "if we can so call a hill terminated by a platform, is much less remarkable for its height than its perfect preservation." † Placed upon two terraces, a wall built of large blocks of free-stone rises to the height of eighteen or twenty feet, supporting and enclosing a platform of earth. This platform forms a regular oval, lying in the direction of the cardinal points, and its great axis is nearly one hundred and twenty-seven feet in length. "The interior of this oval is a flat piece of ground covered with rich vegetation, which increases the picturesque effect of the landscape. In the centre of the enclosure, is a house containing only two rooms, which are near seven metres in height. This house and the enclosure form part of a system

* Mercurio Peruano, vol. v. p. 262.

† Humboldt's Researches, vol. ii. p. 195. Ibid. vol. i. pp. 242, 247, etc., 258. Ulloa says this fortress is the "most entire, the largest and best built, in all the kingdom."—*Ulloa*, vol. i. p. 501.

of walls and fortifications," "which are more than one hundred and fifty metres in length. The cut of the stones, the disposition of the doors and niches, the perfect analogy between this edifice and those of Cuzco, leave no doubt respecting the origin of this military monument, which served as a lodging to the Incas, when those princes journeyed occasionally from Peru to the kingdom of Quito." The stones used in this building are not of great size, but they are beautifully cut into parallelopipeds, with perfect precision, the outer surface, however, being slightly convex, and cut slantingly towards the edge, so that the joints form small flutings. The door-posts are inclined; in the interior are niches hollowed into the walls, and between them are cylindrical stones, with polished surfaces projecting from the wall. The greater part of the wall is apparently constructed without cement, but in some places may be observed a mortar, composed of a mixture of small stones and argillaceous marl.*

Near Cannar are the rocks of Inti-Guaicu, and the Yngachungana.† The first is an image of the sun, upon a mass of sandstone, partly natural and partly sculptured, consisting of several concentric circular lines enclosing a space, in which eyes and a mouth have been engraven. "The foot of the rock is cut into steps, which lead to a seat hollowed out in the same stone, and so placed, that from the bottom of the hollow, the image of the sun may be seen." To the north of the ruins, upon the side of a hill, were the gardens attached to this fortress, and

* According to Ulloa, a species of mortar of uncommon hardness, called Sangagua, was used by the ancient Indians, in their buildings. — *Ulloa*, vol. i. p. 268.

† Humboldt's *Researches*, vol. i. pp. 247, 253.

in them is the Ynga-chungana, or The Sport of the Inca, being a stone seat or sofa decorated with sculpture in arabesque, and placed so as to command a most delightful prospect.

Callo. At Callo, about ten leagues to the south of Quito, is a building called "The Incas' House."* "This edifice forms a square, each side of which is thirty metres long. Four great outer doors are still distinguishable, and eight apartments, three of which are in good preservation. The walls are nearly five metres high and one thick. The doors, similar to those of the Egyptian temples; the niches, eighteen in number in each apartment, distributed with the greatest symmetry; the cylinders for the suspension of warlike weapons; the cut of the stones, the outer side of which is convex, and carved obliquely, all remind us of the edifice at Cannar." Ulloa says, the stones are hard as flint and almost black, well cut, and joined so curiously as to be impenetrable at their joints to the point of a knife; that no cement is visible, the courses are unequal, and that small and large stones are intermixed, but fitted closely to the inequalities of each other. Humboldt, however, asserts that the stones are cut into parallelopipedons and laid in regular courses.

Caxamarca. Caxamarca was once noted for possessing a palace and baths. The remains of the palace, which are trifling, consist only of a part of a wall, the stones of which are irregular in their shape, but smoothly cut, and fitted closely together. At the distance of two leagues, is a monument called The Inga-Rirpo, or "Resting-Stone of the Inca." It is placed within a circular enclosure, about eight yards in diameter, on

* Hum. Res., vol. ii. pp. 5, 7. Ulloa, vol. i. p. 499. Stevenson, vol. ii. p. 342.

† Ulloa, vol. i. p. 500.

the ancient road running from Cuzco to Quito. It is a large block of freestone, eleven feet long, two feet eight inches high above the ground, and thirteen inches thick. It has two grooves cut across it, near to the centre, four inches deep and five inches wide. "The site of this resting-stone commands a most beautiful prospect of the valley of Caxamarca. The tradition of the Indians is, that the Inca used to be brought here, to enjoy the prospect, and that the two grooves in the stone were made, that the cross-ledges of the stone, on which he was carried, might rest secure in them."*

Five leagues from Caxamarca, are the ruins of a city constructed upon a singular plan. Many of the houses are yet entire; they are all built of stone, and encircle a small mountain. In the lower tier or range of houses, the walls are of amazing thickness, and composed of stones, some of which are twelve feet long, and seven feet high—one stone forming the whole side of a room, with one or more large slabs laid across, for a roof. Some of the walls are constructed with two casings of stone, and the interval is filled up with pebbles and a mortar of clay, the whole forming a mass almost equal to stone in hardness. "Above these houses another tier was built in the same manner, on the back of which are the entrances or doorways; and a second row had their backs to the mountain. The roofs of the second tier in front had been covered with stone, and probably formed a promenade; a second tier of rooms thus rested on the roofs of the first tier, which were on a level with the second front tier. In this manner one double tier of dwelling houses was built above another, to the height of seven tiers." Thus, there were six circular streets, and

* Stevenson, vol. ii. p. 164.

seven terraces of buildings, which were intersected by four roads conducting to the summit, in the direction of the cardinal points. On the top are extensive ruins of what appears to have been a palace, or fortress. The whole city consists of erections of stone, and not of excavations,—the doorways are narrower at the top than at the bottom,—the stones have been hewn into squares of irregular size, and are cemented together ;—there are no remains of sculpture save a few ornaments in arabesque ; and the mass of buildings is of sufficient extent, to have contained several thousand families.*

In the Paramo of Chulucanas, is the ancient city of that name, between the Indian villages of Ayavaca and Guancabamba, on the ridge of the Cordilleras. It is situated on the slope of a hill, near a small river. The houses contain but one room each, the streets cut each other at right angles, and the hill is divided into six terraces, each platform of which is faced with hewn stone.†

On the plain of Tacunga are the remains of a palace, built of hard black stones, with their outer surfaces convex and fluted, like those at Cannar and Callo. Of this edifice there still exist a large court, and three extensive halls forming three sides of an enclosure.‡

About a league to the north of Diezmo, are the ruins of Tabo-inga, or Tambo-inca. The walls of most of the dwellings are standing, from the height of from two to eight feet ; and the houses appear to have been built of different sizes and shapes, some being circular, and others square. They are gen-

* Stevenson, vol. ii. pp. 169, 170, 174.

† Humboldt's Researches, vol. ii. pp. 198, 200.

‡ Stevenson, vol. ii. p. 283.

erally separated from each other, and have all been constructed with large unbewn stones, the interstices being filled up with smaller ones, and the whole cemented together. About two hundred yards to the north-north-west are the ruins of a temple, of a quadrangular form, with a flight of a dozen steps on two sides. The walls are quite levelled: the whole seems to have been surrounded by a stone wall or barrier, which included a considerable portion of the plain.*

In the following description, which is cited at length, as containing some valuable suggestions upon the subject of Peruvian architecture, Mr. Poepig describes the ruins of Tambobamba, which are found a few leagues from Diezmo. "From the great extent of this scattered village," he says, "we may form some idea of its ancient consequence. Such of the houses as are still left, or of which we can trace the remains, lie scattered without any seeming regularity." "The detached buildings are pretty equal in size, and are separated from each other by small intervals, which seem to indicate that each was surrounded by a court-yard. This very same style of building is still followed by the Indians of the Andes, and even the same mode of erecting the walls has continued unchanged; if we except from the comparison the greater negligence of the Peruvians of the present day. The walls are built in a circular form, are from thirty to forty paces in their outer circumference, and from six to ten feet in height." The materials consist of stones cemented together by a tough kind of earth, which has become exceedingly indurated. "The most remarkable features, in the architecture of these ruins, are the pointed or bell-shaped roofs, which are composed of smaller tones, embedded

* Smyth's Narrative, pp. 33, 34.

in indurated clay. Ulloa says very decidedly that nothing is known of the manner in which the Peruvians' roofed their houses, but that it was most probable they were covered with flat wooden roofs, as no trace of vaults or arches has been discovered amid the ruins, and every thing indicated that the key stone was altogether unknown in that age. The few remaining domes of the roofs of Tambo-bamba, are in the form of a bell, and from twelve to fifteen feet high. In the thatched roof of the modern Indians, we trace the exact imitation of these ancient buildings, and I was told that the use of cupolas for similar small Indian buildings is still very common in the neighborhood of Cuzco."* In corroboration of the views entertained by this author, it may be mentioned, that from the remains of some buildings in the islands of Capachica, it is asserted that the Peruvians had made some approach to the knowledge of the arch: but these ruins are not sufficiently described, to afford a solution of this interesting question.†

Near the village of Supe, in the valley of Huaura, are the ruins of an ancient town, built upon the side of a rocky elevation. Galleries have been cut into the rock, for the purpose of making room for their small houses, many remains of which are visible, and also of small parapets of stone raised above them, so that the hill has the appearance of a fortified place. At a short distance, are the ruins of another town on an elevated plain.‡

The Peruvians and neighboring nations also constructed

* Poepig's Travels, as cited above.

† Mercurio Peruano, vol. v. p. 262.

‡ Stevenson, vol. i. p. 412.

edifices of unburnt brick.* In the vicinity of Palca, on the road from Arica to the lake of Puno or Titicaca, Dr. Meyen observed some ancient buildings of this character. "The square towers, which occur in this neighborhood, are particularly curious. They are about twenty feet high, eight broad, and built entirely of unburnt brick. Bands of metal are occasionally inserted, to give them greater firmness.† One of these obelisks was damaged at its base, which enabled us to discover, that it was not hollow, but quite filled up. On questioning the country people about these buildings, they merely said, "They are of the times of the Kings," that is, of "the Incas." In the immediate vicinity of Palca, we counted seven of these obelisks, three of which stand almost close together. As they have not been painted, the natural color of the clay gives them a very sombre and dreary appearance. We met with them also in some other places, in the vicinity of Puno for instance."‡

Near Lurin, a bathing place in the vicinity of Lima, are the ruins of the city of Pachacamac. They lie in a fertile valley, and are supposed to be the relics of a place of great opulence, which was in a flourishing condition when first visited by Francisco Pizarro, in 1533, and was then distinguished for a remarkable temple dedicated to the worship of Pachacamac. Mr.

* Condamine's Memoirs. Molina, vol. ii. p. 20.

† The stones of some of the edifices at Cuzco, are said to have been fastened or clamped together by bands of silver and gold; and it was asserted in 1792, that to that day, there might yet be seen, in the walls of the Portal of the Convent of St. Domingo at that place, the remains of the silver which was infused between the stones, in order to unite them the more firmly. Mercurio Peruano, vol. v. p. 259.

‡ Meyen's Voyage round the world, Berlin, 1834; in For. Quar. Rev. No. xxix. p. 12.

Ruschenberger considers these ruins to be the remains of the temple of that god.*

At a short distance from Lima, on the northern road, are vestiges of an ancient town called Concon. The walls, like those of Pachacamac, are built of adobe, or sun-burnt brick, are of considerable thickness, and are still standing, in some places, to the height of nine or ten feet. The situation of these remains is immediately at the foot of a hill, which appears to have been fortified, and encircled with thick walls, portions of which are still visible.†

On the right-hand side of the road from Callao to Lima, may be observed other ruins, formed of clay or adobes; the walls of some of the dwellings are about two feet thick, and six feet high.‡ Near the town of Cayambé, Ulloa saw the remains of a temple built of unburnt brick. It stood on an eminence, its figure was circular, and its diameter was about fifty feet. The walls are fifteen feet high, from four to five feet thick, and the bricks are cemented together with clay: this edifice is supposed to have been dedicated to Pachacamac.§

According to Ulloa, one of the ancient methods of fortification consisted in digging three or four ranges of moats quite around the tops of high and steep mountains, and protecting them, on the inside, by parapets. These were called *pucuras*, and within the last range of moats, were the barracks for the garrison; in some of these, the outward circumvallation was

* Smyth's Narrative of a Journey from Lima to Para, p. 1. Stevenson, vol. i. p. 144. Ruschenberger, p. 300.

† Smyth's Narrative, p. 17.

‡ Mod. Trav. Peru, vol. ii. p. 23. Stevenson, vol. i. p. 140.

§ Ulloa, vol. i. p. 498. Stevenson, vol. ii. 341.

above a league in extent. His remark, that fortresses of this kind are so numerous that one scarce meets with a mountain without them, is justified, in a great measure, by the observations of more recent travellers.*

Near the village of Banos, in Huamalies, are the ruins of a large building, somewhat similar to those of Cannar and Callo, and of a circular temple; and on the tops of two mountains, one situated on each side of the river, are the remains of two fortresses. In the construction of these fortifications, the sides of the mountains have been divided into galleries ranged one above another, in some parts formed by artificial breastworks, and in others cut out of the solid rock, the breastwork being left in solid stone.†

Near the road from Potosi to Tacua, upon an eminence, are the remains of an ancient city. On one side it was protected by a deep ravine, and it was surrounded by a rampart of stonework. The walls have openings or embrasures, and the stones are "dovetailed together in a very singular manner. In the centre of the place was a citadel, reserved as a last retreat from hostile attack."‡

In the vicinity of Guambacho are the remains of an extensive line of fortifications; the wall runs along the side of a lofty mountain, close to the sea, is entire in many parts, and appears to have been built with rude bastions.§

Near Patavilca, and about one hundred and twenty miles

* Ulloa, vol. i. p. 504. Stevenson, vol. ii. pp. 342, etc.

† Mercurio Peruano, vol. v. p. 259. Stevenson, vol. ii. pp. 100, 101.

‡ Andrews' Travels in S. Am., vol. ii. p. 161.

§ Stevenson, vol. i. pp. 312.

from Lima, is a place called Paramonga, or The Fortalesa. "The ruins of a fortified palace of very great extent are here visible; the walls are of tempered clay, and about six feet thick. The principal building stood upon an eminence, but the walls were continued to the foot of it like regular circumvallations; the ascent winded round the hill, leaving many angles, which probably served as outworks to defend the place. It is supposed to have belonged to the Chimu or King of Mansichi, and was a frontier palace during the time of the Incas." Not far from the Fortalesa are the ruins of an extensive town.* The valley of Guarney contains the ruins of an ancient fortress, and also a structure similar in design to the wall of Tlascala, in Mexico. The valley, it is said, is crossed by the vestiges of a wall, which is supposed to have been built by the Grand Chimu in his last war with the Incas.† Similar military works have been discovered in many other places in Peru; and also in Chile,‡ where, amongst others, the remains of an ancient fortress are to be observed near the river Cuchapoal.§

Sculpture. The dexterity of these people in cutting stone, and other hard substances, excites our amazement.|| Humboldt

* Ulloa, vol. ii. p. 27. Stevenson, vol. ii. pp. 22, 23.

In the plain on which the city of Truxillo is situated, called del Chimu, are the remains of what is supposed to have been the ancient residence of the Chimu. They appear like the foundations of a large city, or the walls of a garden crossing each other at right angles.—Stevenson, vol. ii. p. 121. Ruschenberger, p. 381.

† Ruschenberger, p. 361.

‡ Frezier, p. 262.

§ Molina, vol. ii. pp. 10, 68.

|| The Jesuit's College at Quito, a beautiful piece of architecture and sculptured workmanship, was constructed by the *Indians*, under the direction of Father Sanches, a native of Quito. In

brought from South America a ring of obsidian, which had been a girl's bracelet, and was in the form of a very delicate, hollow, perforated cylinder: "we can scarcely conceive," he remarks, "how a vitreous and fragile substance could be reduced to the state of so thin a plate."* At Patavilca we find sculptures in porphyry, basalt and other hard stones, and everywhere through Peru, similar evidences of the ancient skill, in cutting the hardest of rocks, abound.† The axes of basalt, the marble vases and the sculptured rocks in Chile; and the engraved Calendar Stone, and the head found by Humboldt amongst the Muyscas, indicate that these signs of civilization are not confined within the boundaries of the Peruvian empire.† The distinguished traveller just mentioned, from the observation of the great perfection of these sculptures, was induced to believe, that tools of copper had been used in their formation; and he adds, that this conjecture has been justified, by the discovery of an ancient Peruvian chisel, found at Villacamba, near Cuzco, in a silver mine worked in the time of the Incas, consisting of ninety-four parts of copper and six of tin.‡ Some of the arti-

Chile "in the plains and upon most of the mountains," says Molina, "are to be seen a great number of flat circular stones, of five or six inches in diameter, with a hole through the middle. These stones which are either granite or porphyry have doubtless received this form by artificial means, and I am induced to believe that they were the clubs or maces of the ancient Chilians, and that the holes were perforated to receive the handles."—*Molina*, vol. i. p. 56.

* Humboldt's *Researches*, vol. i. p. 257. Stevenson, vol. ii. p. 23.

† Frezier, p. 135. Molina, vol. ii. p. 25. Humboldt's *Researches*, vol. ii. p. 205.

‡ Humboldt's *Researches*, vol. i. p. 260.

cles found in the mounds are also composed of hardened copper ; and Dr. Meyen, in speaking of the collection of antiquities in the Museum at Lima, says, " the ancient weapons are of copper, and some are of exquisite manufacture."

Traces of the art of cutting and working in stone are not confined, even, to the extensive region just indicated. In the province of Cujo, in Chile, between the cities of Mendoza and La Punta, upon a low range of hills, on a large stone pillar, called "The Giant," certain marks or inscriptions have been observed ; and near the Diamond river, upon another stone, besides some ciphers, or characters, are the figures of several animals, and "*the impressions*" of human feet.* Passing far to the north, on the banks of the Orinoco and in various parts of Guiana, there are rude figures traced upon granite and other hard stones, some of them, like those in the United States, cut at an immense height upon the face of perpendicular rocks. They represent the sun and moon, tigers, crocodiles, and snakes, and occasionally they appear to be hieroglyphical figures and regular characters.†

It is unnecessary, after having thus examined the testimony of numerous travellers, to enter into any labored argument for the confutation of the observation of Robertson, who concludes a brief description of the state of society in Peru by saying, " in all the dominions of the Incas, Cuzco was the only place that had the appearance, or was entitled to the name, of a city ;" for the extent of some of these ruins, and the traces of the great skill and patient labor, with which the most barren soils were cultivated and rendered fertile and productive, prove

* Molina, vol. i. p. 270.

† Humboldt's Pers. Narr., vol. v. pp. 593, 595. Vol. 4. p. 499.

beyond contradiction the existence of an ancient agricultural population, and their association in large communities and cities. Nor are these evidences of civilization confined to the isolated instances which have been cited; "up even to the very tops of the mountains, that line the valleys through which I have passed," remarks Mr. Temple, "I observed many ancient ruins, attesting a former population, where now all is desolate."* "In proceeding on our journey from Guarney," says Ulloa, "we met with a great many remains of the edifices of the Incas. Some were the walls of palaces, others, as it were, large dikes by the sides of spacious highways, and others fortresses or castles, properly situated for checking the inroads of enemies."† Humboldt states, that these ruins are scattered along the ridges of the Cordilleras, from the thirteenth degree of south latitude, to the equator, and that he counted nine of them, between the Paramo of Chulucanas, and Guancabamba.‡

But in examining the line of civilization, as indicated at present by these ancient remains, which is found to commence on the plains of Varinas, and to extend thence to the ruins of the stone edifices, which were observed about the middle of the last century, on the road over the Andes, in the province of Cujo, in Chile; or to the road described by the Jesuit Imonsf; or to the ancient aqueducts upon the banks of the river Maypocho, in south latitude thirty-three degrees sixteen minutes; we are surprised to discover a continuous, unbroken chain of these relics of aboriginal civilization. Reverting to the epoch

* Travels in Peru, vol. ii. p. 43.

† Ulloa, vol. ii. p. 27. Ibid. vol. i. p. 503.

‡ Humboldt's Researches, vol. i. p. 255. Ibid. vol. ii. p. 198.

of their construction, we are presented with the astonishing spectacle of a great race cultivating the earth and possessing many of the arts, diffused at an early period through an immense territory, three thousand miles in extent. Even up to the time of the discovery, most of this vast region was occupied by populous tribes, who were dependent upon agriculture for subsistence, were clothed, and in the enjoyment of regular systems of religion, and their own peculiar forms of government. From conquest and various causes, some sovereignties had increased more rapidly than others; but still, whether we are guided by the testimony of the Spanish invaders, or by the internal evidence yet existent in the ancient ruins, it is impossible not to trace, alike in their manners, customs and physical appearance, and in the general similitude observable in the character of their monuments, that they were all members of the same family of the human race, and probably of identical origin.

Clearly, then, it is a great error to suppose, that the Peruvian empire embraced within its limits all the civilized tribes. Indeed the Incas, themselves, acknowledged the existence, at Tiabuanaco, of ancient structures of more remote origin, than the era of the foundation of their empire; and which were confessedly the models of those, erected by them in their own dominions,—an admission fully proved by an examination of their edifices. This fact attaches great interest to the sacred lake of Titicaca, and its environs, which we are led to consider as an ancient, perhaps the most ancient, locality of South American civilization. It indicates also two epochs of the arts, one of remote antiquity, and the other of modern date; and exhibits, in that respect, a striking parallelism with Mexico.

PART II.

RESEARCHES INTO THE ORIGIN AND HISTORY OF THE RED RACE.

CHAPTER I.

COMPARISON OF THE ANCIENT MONUMENTS.

THE various topics of interest, connected with the history of the aborigines of America, are naturally resolved into two great divisions. Of these, the first includes several important questions relating to their history, since the original migration to this continent, and the second respects the solution of the problem of their origin; the first is confined, in its discussion, to a review of the ancient monuments which have been described, and to an examination of the traditions, languages, customs, and institutions of the respective tribes and nations, and the second involves a comparison with several of the nations of the eastern hemisphere. Many facts, however, are common links to the chain of each investigation, and it is impossible, therefore, to comprehend their full force, in either case, until the argument in relation to both is finally determined.

Having, at this point, examined the ancient ruins, in a manner too general perhaps to present a graphic description,

but, it is hoped, with a minuteness sufficient for the comprehension of their style and character, we are led to inquire, whether they present any indications of having proceeded from the same race. It has already been seen that they appear to be capable of an arrangement into three groups; those found in the United States composing one; those in Mexico and the adjacent states constituting another; and the third consisting of such as have been discovered in South America. It is true, that each of these three leading divisions embraces the productions of art of many distinct nations, differing, as it is reasonable to anticipate, in various minor and unimportant details; but we still find striking analogies which indicate their common origin. In a comparison of the groups themselves, the same remark is applicable, and while we discern much that appears peculiar and original in the arts and civilization of each, there are, also, certain decided marks of a primitive connection, between these three great families,—just such traces of relationship, indeed, as might be presumed would have survived, after the lapse of many ages since their separation.

The style of architecture, among semi-civilized nations, depends greatly upon the materials which abound in their territory; and even with the same people, a change often takes place in the aspect and formation of their structures, produced by revolutions, political causes, or a migration from one district to another of a more or less favorable character. This may be observed in Egypt and India, as well as in America, and may serve to explain such differences as manifestly exist between the ancient edifices in the United States, Mexico, and South America. In view, then, of the very remote period at which the original separation of the aborigines occurred, and of the

physical peculiarities distinguishing the particular districts into which they proceeded, in the progress of this inquiry we should have constant reference to the natural aspect of each locality, and should prefer a comparison of the most ancient monuments, and such as, from their connection with religion, were the least exposed to change and innovation.

Near lake Titicaca, on the plains of Tiahuanaco, in Peru, are the remains of what has been generally esteemed as the most ancient temple in South America, and which was religiously copied by the Incas, in their sacred edifices: and according to the authorities, it was an enormous *terraced* pyramid, faced with stone, and dedicated to the Creator of the universe. The Temple of the Sun at Pachacamac was built upon an artificial hill or mound. At other places, in the same country, structures which have been denominated fortresses, upon uncertain conjecture, were apparently built in the same terraced style. The temple at Diezmo was elevated, and approached by means of a flight of steps on two sides; the "fortress" at Cannar was a building erected upon an oval platform of earth, supported by two terraces, the axes of which were in the direction of the cardinal points; the "fortresses" at Huamalies were hills regularly terraced to their summits; the same was the case with the mount which supported the "palace" at Patavilca; and we find similar terraced hills, even in Chile. If some of these were religious structures, consecrated to the Deity, or to the Sun, we may regard them as the remains of those magnificent "Temples of the Sun," spoken of by the early authors, or at least as the terraced pyramids, partly or wholly artificial, which supported those sacred edifices.

In Mexico and the neighboring states, we know that the

Teocalli, or "Houses of God," or Houses of the Sun,—for the word "Teotl," the appellation of the Supreme Being, was also used to denote that luminary,—were regular terraced pyramids, supporting chapels which contained the images of their idolatry. Indeed, the two great pyramids of Teotihuacan were dedicated, respectively, to the Sun and Moon, and those which surrounded them to the Stars.

In the United States, we have some specimens of the terraced pyramid, preserved to this day, though immense mounds of earth, without stages, most usually supplied its place. Occasionally we perceive that the terraces have almost disappeared, but in other instances they are plainly visible. "The great mound at Cahokia," observes Mr. Brackenridge, "is evidently constructed with as much regularity, as any of the Teocalli of New Spain; and was doubtless cased with brick, or stone, and crowned with buildings." In common with the Peruvians and Mexicans, and other nations in New Spain and South America, the Natchez, and other tribes in the United States, also worshipped the Sun; and from the contents of our mounds, from the form and position of some, unquestionably devoted to religious purposes, from the coincidence between them and the temples of Peru and Mexico, in ranging accurately with the cardinal points; and from the care with which an eastern view and access were preserved, it may be concluded, that the worship of that body was a prominent feature in the religion of their authors. This opinion is confirmed, moreover, by the medals of the Sun and Moon, which have been disinterred from the mounds.* The Mexicans and Peruvians were skilled in astronomy; among all ancient and primitive nations,

* Arch. Am., vol. i. p. 243.

the worship of the heavenly bodies was connected with a knowledge of that science; and the benefit of this inference may be justly claimed for the Mound-builders. Among those tribes in the United States, which appear to have preserved some relics of this ancient faith, we might anticipate the existence of some traditional proof of the name and uses of the great mounds. Accordingly the tradition of the Choctaws, in relation to the mound on the Black river, maintained that "in its midst is a great cave, which is the 'House of the Great Spirit;'" and Adair expressly assures us, that the same tribe called these old mounds "Nanne-Yah,"—"The Hills or Mounts of God," a name almost identical with that of the Mexican pyramids.*

It may be observed also, that both the Mounds and the Teocalli are frequently approached by converging roads or causeways, in such a manner as to favor the idea, that at certain great festivals they were visited by processions of large bodies of people;† that the Teocalli, the Temples of the Sun, and some of the Mounds, were alike surrounded by walls, or trenches; and that the regular disposition of small mounds around the Teocalli resembles the symmetrical arrangement of the tumuli around many of the Mounds.

It must be confessed, that in the progress of this comparison, we find no vestiges in the United States of such edifices as crowned the Mexican and Peruvian terraces. But upon the great alluvial plains of the west, the materials for such struc-

* Tr. Am. Phil. Soc., vol. iii. p. 216. Adair, p. 378.

† This is a clearly authenticated historical fact, in relation to the Teocalli.

tures are rare.* "All the monuments I have seen," says Mr. Flint, "were in regular forms, generally cones, or parallelograms. If it be remarked, that the rude monuments of this kind, those of the Mexican Indians even, are structures of stone, and that these are all of earth, I can only say, that these memorials of former toil and existence are, as far as my observation has extended, all in regions destitute of stones."† Perhaps, however, upon this point, it must be conceded, that the people of the North had deteriorated and fallen away, in some degree, from the more advanced civilization of their progenitors at the South; and particularly had experienced that decline in architectural art, which might naturally occur to a migrating tribe. That the authors of the Mounds were not wholly ignorant of the art of working in stone, appears from many of the ruins. The fortresses surrounded by walls of stone; the sculptured remains discovered in the mounds; the stone buildings, in Missouri, constructed with great symmetry and with regular apartments; and the ruins of an ancient town, in the same State, where the lines of streets and squares, and the foundations of stone dwellings may still be seen, all tend in some measure to support this position.‡

The methods of fortification at the North and the South

* In Assyria, a country occupied at a very early period, by nations skilled in the arts, the absence of any structures to be compared with those of Egypt, has been explained, upon the same reasoning.—*Landseer's Sabean Res.*, p. 88.

† Flint's *Recollections*, p. 164.

‡ Ulloa speaks of the resemblance between certain old buildings in Louisiana and the Peruvian edifices.

present some analogies. Palisadoes, earthen entrenchments, and long walls with bastions were common; and each people appears to have exercised great prudence and judgment, in the selection of commanding military positions.* In Peru and Mexico there are many vestiges of fortifications, similar to the mural remains of the United States. Ulloa speaks of numerous walls and ruins, in Peru, both in the plains, and on the sides and summits of hills, some of them composed of adobes or rough stone, without any arrangement, the more irregular of which were attributed to the Indians, before they were reduced by the Incas.† The earthen causeway, on the plains of Varinas, resembles many in the United States, and ancient earthen entrenchments have been observed, even in Chile.

Water was a sacred element in Mexico; the lakes of Titicaca and Guatavita, in South America, were objects of veneration, and one of them was certainly visited for the purpose of religious ablution;‡ and from the position of many of the most remarkable mounds in the United States, upon the immediate margins of streams, it may be inferred that the same element was worshipped there.

In South America, the dead were sometimes buried in ordinary graves, in a sitting posture,—at others, interred in the *huacas*, some of which were hollow,—again, they were deposited in caves, or burned, or embalmed. In Mexico all these methods prevailed; the most usual course was interment in

* Clavig., vol. ii. p. 389.

† Ulloa, vol. i. p. 503. Ibid. vol. ii. p. 113.

‡ The Peruvians were accustomed to bathe in rivers, by which means they supposed they were cleansed of their sins.—*Vega*, vol. i. p. 16.

common graves, and in a sitting posture; the bodies of chiefs, kings and illustrious persons were either embalmed, or burnt, the ashes and bones being often deposited in the mounds and Teocalli, many of which were hollow: caves were also sometimes employed as cemeteries.* In our own country are ancient graves, with bodies buried in a sitting posture; mounds erected over the ashes of the dead, or with chambers containing skeletons; and caves in which numerous bodies have been discovered, wrapped in cloths, interred in the same peculiar flexed position, and betraying strong indications of the custom of embalming. The practice of burying with the deceased articles emblematic of his character or intended for his use in another life, and also a portion of his riches, was common to all these nations, as has been demonstrated by the contents of their sepulchres.

The masks dug from the mounds, have a parallel in the masks represented upon the Mexican monuments, and employed in their religious ceremonies, and also in the masks used by the Muyscas, in South America. Articles composed of copper have been found in the mounds; and the Mexicans and Peruvians possessed the knowledge of the art of hardening that metal, by an alloy of tin, in which manner, probably, the tools employed in the execution of their sculptures were fabricated. A copper cross has been discovered, lying upon the breast of a skeleton, in one of our mounds; a cross decorated the pinnacle of the

* In some caves, near Durango, in Mexico, it is said, a vast number of mummies has been discovered. They were buried in a sitting posture, and wrapped in bands of cloth. With them were found deposited a great variety of ornaments, beads, knives of flint, finely worked cloths and marine shells.

Temple of the Sun, at Cuzco, and the same object was worshipped in Yucatan, and the adjacent countries.

Marine shells have been exhumed from the mounds, were sacred in Mexico, and have been discovered in the *huacas*. Cloths of a manufacture similar to those fabricated at the south, were wrapped around the mummies of the Kentucky caves: articles of gold and silver, and beads and necklaces appear in the mounds; and the use of the precious metals, and of beads and necklaces was common to the southern nations. The Pecari, the bones of which have been found in one of the Kentucky caves, is the Mexican hog, an animal not indigenous in the north. Some of the northern nations venerated the owl; the Evil Spirit, or malign God of the Mexicans was called "Tlacatecolotl," or rational owl; and the sculptured owl discovered in one of the Ohio tumuli, appears to have been suspended from the roof of some building, like many of the Mexican sacred sculptures. The Cyclopean arch of inverted steps, was probably used in Peru, is perceived in the Mexican and Toltec edifices, and in the stone buildings in Missouri. Covered ways, leading from the ancient towns and cities to adjacent streams, are observable in Mexico and the United States; the Mexicans and the Mound-builders wore buskins, conical caps, and head-dresses somewhat similar; and in fine, all three of these groups of nations employed mirrors in their religious ceremonies, constructed brick and earthenware, wrought in some of the metals and in stone, built roads, and conduits for water, and attained considerable perfection in agriculture. It thus appears, from this brief comparison, that America presents three points of ancient civilization, between which, so far as may be gathered from monuments and relics, some striking analogies are developed.

CHAPTER II.

ANCIENT CIVILIZATION—ABORIGINAL MIGRATIONS.

I. *Decline of ancient civilization.* If the examination of the architectural monuments, and other remains of these three families of civilized nations, appears in a measure, to identify their origin,—or at least to justify the inference, that they were constructed by members of the same primitive branch of the human race, separated after their arrival on this continent; whither are we to look for the origin of the other, and less civilized class of American aborigines? Whence came the tribes of barbarous Indians? It may, possibly, be considered somewhat extraordinary, and unphilosophical, to search for any traces of their derivation from an ancient and civilized race, among the arts, customs, and traditions of rude and ignorant savages. But although many of the Indian tribes, as well at the period of the discovery as at present, might be estimated as rude, and some of them nearly at the lowest grade of humanity, there exists reason for asserting of them, in common with other families of men, a descent from a more enlightened ancestry. It is indeed a grave question whether any portions of our race, however abased, have not retrograded from a more advanced stage of knowledge and intelligence. Many refined theorists upon the rights, laws, and institutions of mankind, have been wont to picture an original condition of social infancy, whence in slow gradation all the arts and sciences have emerged. Unquestionably, vast regions

of the earth are now occupied by tribes in this state of barbarism, but is it certain that such was their original condition ; or cannot we, rather, by some feeble glimmerings of light amid their dark and unseemly institutions, perceive the wreck and fragments of a higher degree of knowledge, the remains of a more beautiful and lofty order of things ?

Historically, no such period of common and universal degradation has ever existed, if we place any reliance upon ancient authorities, or upon that most venerable of all records, the Bible. We find no foundation for such an opinion, amid the relics which have been transmitted to us, both from sacred and profane sources, of the human condition before the deluge. Man, as we are told in the Genesis, was formed in the express image of his Maker,—and what more vigorous and comprehensive language could have been chosen, to indicate that his moral and intellectual faculties were of the highest and noblest order and capacity ? The primitive members of the human family, also, were probably not enervated in their mental and physical power, to such an extent as in subsequent ages, by the effect upon the human constitution of great moral turpitude and sensual excess, which appear to have the power of impairing the original perfection of our nature, by a gradual and hereditary increment. It has been suggested, likewise, that the duration of antediluvian life was favorable to more thorough, complete, and rapid attainments in knowledge, from the opportunity afforded for prolonged individual observation, experience and reflection.* The learning of a short life just developed into im-

* The remark of Josephus on this point, is, at the least, curious. "Wherefore," he says, "on account of their virtue, as well as for the perfection of the arts of astronomy and geometry, which they invent-

portant principles and results, was not suddenly cut short and buried in the grave, to attain an imperfect resurrection with the youth of a new generation, after toil and study; but ages rolled on, during the sure and steady course of uninterrupted individual observation, and in the life of a single person sciences might spring from the germ, into full and ample expansion. In any event it is certain, that the nearer we approach the creation, the more are evidences exhibited of great spiritual and intellectual attainments,—of revelations from heaven,—communications with the Creator,—an understanding of great moral truths, and an extensive knowledge in physical science. By the dim and misty light, with which we see darkly this distant period, enough is still perceptible, to infer that the human mind, instead of being debased, held an exalted condition, from which it subsequently fell. The origin of the art of writing lies beyond the reach of authentic profane history, and language appears to have been thus represented, before the picture-writing and hieroglyphic systems were in use. Yet there are several traditions, which ascribe to it an origin before the flood. Eustathius says that the Pelasgians were called divine, because they alone, of all the Greeks, possessed the use of letters after the deluge.* The accuracy of the genealogies of the Genesis favors the same idea; the art of writing is mentioned in the book of Job,† one of the most ancient of works, and at least it may be permitted

ed, God permitted them (the Patriarchs) a longer life, inasmuch as they would have been incapable of predicting any thing with certainty, unless they lived six hundred years, for such is the period of the completion of the great year.”—*Josephus. Antiq.*, lib. i. c. 3.

* Com. Iliad, p. 841.

† Job 13: 26; 19: 23, 31.

to say, that "it might be improper to assert that letters were unknown before the deluge."*

But let us examine in other respects. Of Adam's two sons, one was a tiller of the earth, and the other a shepherd;—as we proceed from the creation towards the era of the flood, we learn that social institutions existed, that the useful arts were practised, and that music and astronomy were cultivated. There were artificers in brass and iron,—the ark was constructed,—the year was divided into months, and there are good reasons for supposing, was calculated at its real duration. Sir William Drummond has endeavored to show that the zodiac was actually divided;† Noah was acquainted with the division of animals into clean and unclean, and consequently, to a certain extent, with natural history.‡ The author just cited proves that the Babylonians considered their country to have been rich and flourishing before the deluge;§ and Job attributes his knowledge to the former age.|| Immediately after that event, we find additional tokens of civilization. The division of the heavens into constellations is clearly pointed out in the book of Job, and probably the representation of these by the figures of animals. Shortly after the deluge, we read of "bows of steel and molten mirrors;" as appears from the account of Babel,

* Josephus, 1, 2. Amm. Marcell. lib. 22. Astle's Origin and Progress of Writing, p. 46. Wall on Egn. Hieroglyphics. Davies' Celtic Researches, pp. 34, 40.

† Origines, vol. ii. p. 121.

‡ Mr. Davies has ably examined some of these proofs of antediluvian civilization, in his "Celtic Researches."

§ Origines, vol. i. p. 55. || Ch. 8, 15.

mankind were associated into large communities, and in cities ;* and religion, the arts, and sciences were cultivated, according to the most ancient monuments and records of the oldest nations. The Egyptians will sufficiently illustrate the perfection which had thus been attained, so recently after the flood. Eighteen hundred years before our era, they were acquainted with the manufacture of linen, constructed cabinet-ware with great taste and elegance, were skilled in the working and smelting of gold, silver, copper, lead, brass and iron, and in other metallurgic arts, and of necessity possessed an acquaintance with the phenomena and principles of chemistry. They embalmed the bodies of the dead, and manufactured various liquors. They formed artificial gems of exquisite beauty,† and their pigments were of great lustre and permanence.‡ “They were not only acquainted with glass, but excelled in staining it of divers hues, and their ingenuity had pointed out to them the mode of carrying devices of various colors directly through the fused substance.” Their work in pottery and porcelain was brought to a high degree of perfection, and their vases display forms of the most graceful elegance. In mensuration, geometry and astronomy they were well versed, and their architectural productions still excite the astonishment of the world. In music “they were acquainted with the triple symphony—the harmony of instruments—of voices—and of voices and instruments.” In the days of Joseph their commerce extended to distant nations, and their civil and religious institutions were firmly established. The existence of castes alone, is an important evidence of early

* In the days of Moses, the Canaanites dwelt in great walled cities, “fenced up to heaven.” Deut. 9 : 1.

† Seneca, epist. xc. ‡ Pliny Nat. Hist. l. 26, 27.

civilization, as it is predicated upon a settled state of public polity, and a uniform system of labor.* That which is observed of the Egyptians in these early ages, is applicable in a great measure to the Chaldeans, Etrurians, Hindoos, Chinese, Mexicans and Peruvians, and other primitive nations, whose traditions generally assign the arts to an antediluvian, or to an heroic or fabulous origin, or agree that they were existing at a period of unexplored antiquity. With these evidences of very early civilization among the most ancient nations, are we justified in regarding the rude and ignorant tribes of the earth, as the inheritors of an original barbarism, common to all mankind before the separation? The Hindoo traditions declare barbarians to be outcasts, who have been driven from society, or who have wandered away from their parent stock, and subsequently become degraded; and surely if the civilization, existing so shortly after the deluge, was general before the dispersion, such is the only rational conclusion.

This idea is supported also by a sense of justice, which on the contrary supposition, is shocked at an apparent unequal distribution, among different people, of those faculties efficient towards advancement. On the other hand, the opposing opinion is based on an assumption, that mankind in a state of moral darkness are capable of originating and perfecting their own civilization,—a doctrine unsupported by a single historical fact, and contrary to the course of events, in all antiquity. The assertion that mankind “*always* advance and never recede, is equally untrue in philosophy and experience.” At this epoch, as we are too prone, on the one hand, to convert conclusions founded upon the course of the empires of antiquity, into

* Vide Wilkinson, *passim*.

predictions applicable to modern times, and to teach the necessary and natural, rise and decadence of nations, so on the other hand, from the modern conviction of the sure, and steady, and onward course of the human mind for the future, it is usual to imagine that the converse is true, and as progression must have had a commencement, to suppose a period when barbarism was the common and primary condition of our race. Both speculations are perhaps equally unsound, and certainly the comparison is unjust, for it is based upon a fictitious analogy between different and discrepant states of humanity. From the Christian era, or rather from that time, when the civilization of Greece, and of Rome had been finally buried in a common grave,—when the light of science and literature was extinguished, and the new and brighter light of a pure religion began to exert its power,—from that period when the vitality of the old pagan system became extinct, and even the fresh infusion of northern barbarism was ultimately subdued by the renovating influence of another code of morals, the human intellect has been advancing in a steady and unfaltering course of improvement. Before that epoch, however, it was far otherwise, and the historic parallel for many ages runs in a contrary direction. We then find knowledge transmitted from nation to nation—its first beams always coming from without, rather than originating from an internal impulse. Nations then were fitly emblemized by human life, and had their epochs of youth, manhood, old age, and death. Falling upon a new and perhaps vigorous soil, the germs of civilization were often developed into the most luxuriant growth, but the principle of life was wanting, and decay inevitably succeeded. Thus was it with Rome and Greece, the best illustrations of the ante-Christian

era; and as we recede into earlier ages, the same course of degradation is perceived, until we reach those remote times when the primitive nations existed, and are carried back to the period shortly subsequent to the flood, and even to the antediluvian ages. With these views, on turning to the uncivilized aboriginal tribes of both Americas, we shall be able to discern much that favors the idea of their descent from more enlightened progenitors,—faint traces of an ancient civilization not wholly obliterated by the lapse of time. And before entering upon the investigation, this position may be strengthened by the striking and appropriate language of Wm. Von Humboldt: “Neither has the important question yet been resolved,” he remarks, “whether that savage state, which even in America is found in various gradations, is to be looked upon as the dawning of a society about to rise, or whether it is not rather the fading remains of one, sinking amidst storms, overthrown and shattered by overwhelming catastrophes. *To me the latter supposition seems to be nearer the truth than the former.*”

II. *Common origin of the aborigines.* If the idea just advanced, in relation to the civilization of the primitive nations in the early ages of the world, be correct; and if we are justified in asserting for many barbarous tribes, a descent from more cultivated ancestors; it becomes proper to examine whether there are any substantial grounds of distinction, indicating a difference of origin, between the two great divisions of American aborigines,—the barbarous, and the civilized.

1. *Physical appearance.* There are few points, upon which both travellers and naturalists have been more united in opinion, than the physical unity of the American race. No portion of the globe, of the same extent, presents so striking a unifor-

mity in the physical conformation of its inhabitants; and, without excepting those varieties which may have arisen from climate and peculiar modes of life, all the aborigines of both Americas, barbarous or cultivated, in their features, color, and other characteristic indications, exhibit the clearest evidence of belonging to the same great race of the human family. No clearly established traces of ancient intermixture with other varieties of mankind can be discovered; and this general resemblance, therefore, besides proving the common origin of all the tribes, tends also to establish, that up to the era of the discovery, none but the Red race had occupied our continent.

2. *Language.* It was an old and common error, to consider the residents of every Indian village as a distinct tribe; and such was the imperfect knowledge of their dialects, that this mistake was confirmed by the impression, that many languages, now ascertained to be nearly related, were wholly dissimilar. It is not intended to deny the great diversity, which really exists in this respect, nor to trace fanciful analogies between the languages of the various aboriginal nations. But the close and searching investigations, which have been made into the character of these languages, have demonstrated the important fact, that through them all, there may be traced a general unity of structure, and a close and positive similarity in grammatical forms. It was remarked, some years since, that in their construction, in the attributes, the verbs and numerals, a great analogy existed. Mr. Duponceau, in 1819, observed that a striking resemblance was perceptible between the forms of the languages of South and North America; that this analogy was common to *all* the languages; and that to this general principle of construction he had not been able "*to find one single, well-*

ascertained exception." Mr. Gallatin, who has bestowed great learning and research upon this subject, confirms these opinions, and considers it proved, that all the languages, not only of our own Indians, but of the natives from the Arctic Ocean to Cape Horn, have, as far as they have been examined, a distinct character common to all, which seems to establish, "beyond a doubt, that common origin, which could not be discovered in vocabularies so entirely different from each other;" and he adds the important observation, that "whilst the unity of structure and of grammatical forms proves a common origin, it may be inferred from this, combined with the great diversity and entire difference in the words of the several languages of America, that this continent received its first inhabitants at a very remote period, probably not much posterior to that of the dispersion of mankind."*

3. *Religion.* Broken and scattered as were the natives, into so many distinct communities, we are astonished to find the great congruity which exists between the religious belief and ideas of all the tribes, inclusive even of the Mexicans and Peruvians. Through the whole extent of both continents this uniformity is of so decisive a character, as to demonstrate a single primitive source. It will be sufficient at present to state, that with almost all of the aborigines, there is proof of the existence of a belief in a Supreme Being; of the former worship of the Sun; of an extensive polytheism, based apparently, in its origin, upon the doctrine of divine emanations; of a belief in the immortality of the soul and its future state, and in the transmigration of spirits: that, with most of the tribes, there were jugglers, who

* *Archæologia Am.*, vol. ii. pp. 6, 164. Vide also Flint's *Recollections*, p. 137; *Molina*, vol. ii. p. 285, etc.

acted in the triple capacity of physicians, prophets, and sorcerers, or priests; and that sacred ablutions, fasts, and expiatory self-punishments and sacrifices, were of nearly equal prevalence in both continents. These religious ideas are of a primitive type, and are therefore worthy of great consideration; for, while they prove the original unity of the native race, they indicate also the very early period of its separation and dispersion,—a conclusion just drawn from a comparison of the languages.

4. *Hieroglyphic Painting.* The art of communicating ideas, and of preserving the memory of events, by artificial signs, was practised by the aborigines in two methods: the first consisted in the use of pictorial delineations, accompanied with symbols of a hieroglyphical character; and the second, in the employment of knotted cords, and analogous means. The curious and complicated system of picture-writing possessed by the Mexicans was not only known to many nations in their vicinity, but also to at least one of the South American tribes, while it is conceived that traces of its ancient use may be observed among others. “The people of Quito,” remarks Mrs. Graham, “pride themselves in retaining that excellence in painting, which distinguished their predecessors of the time of Pizarro.”* And Frezier informs us that in his day Cuzco was famous for the vast number of pictures made there by the Indians, and that he saw in the same place, portraits of the twelve Incas, one of which he copied.† Herrera speaks of the paintings of animals, which adorned the great temple of Pachacamac, and Garcia has the following singular passage: “At the beginning of the conquest, the Indians of Peru made their confessions by paintings and characters, which indicated the ten

* Travels in Chile, p. 178.

† Frezier's Voyage, pp. 175, 271.

commandments, and the sins committed against them.”* The latter authority Humboldt seems to consider as sufficient to support the conclusion, that the Peruvians were not wholly unacquainted with the method of picture-writing, an opinion which the other facts just cited render more probable. The same author has succeeded in establishing one well authenticated instance of the use of hieroglyphical paintings in South America. Among the Panoes, on the banks of the Ucayale, Narcissus Gilbar found books or bundles of paintings. They contained figures of men and animals, and hieroglyphic characters, delineated in brilliant colors. The tradition was, that they were transmitted to them by their fathers, and represented their ancient travels and wars, and, “hidden things which no stranger ought to know.”† The sculptured hieroglyphic figures, in the caves near the mouth of the Arauca, and in other places, would suggest the wider extension of this art, in ancient times; and it is somewhat curious that the Peruvian word, *quellccani*, to write, signifies to paint,‡ and the Chileno word *chilcan* has the same double signification.§ In North America the ancient figures and inscriptions, and particularly those observed by Bishop Madison in Virginia, appear to belong to the same class of symbolic representations. Charlevoix speaks of certain cloths used in the funeral ceremonies of the Natchez, upon which “they had painted various figures,” probably emblematic.|| As appears from Miguel Venegas, some insular tribes near the coast of California had in their sacred places, paintings which seem to have

* Origen de los Indios, p. 91, in Humb.

† Res., vol. i. p. 174; vol. ii. p. 221. Acosta, l. 5, c. 8, in ibid.

‡ Vocabulario Quichua o del Inca, Lima, 1608. p. 199.

§ Molina, vol. ii. p. 25.

|| Voyage, vol. ii. p. 197.

been symbolical;* and on the north-west coast of America the natives display a decided taste for hieroglyphical delineations.†

Indeed many of the savage tribes, but more especially those of North America, employ conventional signs and paintings as a substitute for letters, and not more rudely executed than might be anticipated of a people, long degraded from a state of higher cultivation. Dobrizhoffer relates that the Abipones, an equestrian people of Paraguay, had certain signs and marks taught them by their ancestors, in the nature of a hieroglyphic language, which they cut upon trees; and that the Guaranies are distinguished for their natural talent for painting.‡ The Arikaras represent their battles, by paintings upon buffalo skins, and they denote their journeys by foot-tracks, a method precisely similar to the one used by the Mexicans for that purpose.§ It is an ordinary Indian custom when they are engaged in hunting or hostile expeditions, to leave at certain points, marks and pictures upon trees, so as to convey an idea of their number, the direction they have taken, the result of the adventure, or any incidents that may have occurred.|| Mr. Pike describes one of these tokens, at a deserted encampment of the Chippeways, which imparted the information, that they had marched a party of fifty warriors, against the Sioux, and had killed four men and four women, which was represented by images carved out of pine or cedar.¶ Indeed the Indians of this stock, the Algonquin, appear to have possessed a method of delineation by

* Hist. Calif. vol. ii. p. 276.

† Voyage de Marchand, in Pol. Ess., vol. i. p. 100.

‡ An account of the Abipones, vol. ii. pp. 62, 63, 271.

§ Brackenridge's Journal, p. 193.

|| Ibid. p. 156.

¶ Pike's Expedition, p. 56.

which they aided the memory in retaining and recalling ideas, with considerable accuracy.* They have traditionary songs which are used at their feasts, for medicine hunting, and upon other occasions, some of which contain internal evidence of their own antiquity. These are preserved, and, as it were, recorded, by rude pictures carved on a flat piece of wood, "which serve to suggest to the minds of those who have learned the songs, the ideas and their order of succession; the words are not variable, but a man must be taught them; otherwise, though from an inspection of the figure he might comprehend the idea, he would not know what to sing."† These pictures, as appears from the illustrations given of them, seem to belong to the same species of pictorial writing as the Mexican, though less complex and finished: we perceive the traces of a system of arbitrary symbols in relation to numbers, and to one of the elements, while another of the elements, water, is represented by the same natural figure as was used in Mexico,—undulating lines. It was probably from a study of these rude picture writings, that Mr. Schoolcraft formed so high an idea of the aboriginal method of delineation.

The Algic nations, he says, found a substitute for letters, in a system of hieroglyphics of a general character, but quite exact in their mode of application and absolutely fixed in their elements; they employed the same hieroglyphic signs to express names and events, which bore quite a resemblance to the Egyptian, expressed a series of whole images without adjuncts, and stood as general memoranda to help the recollection.‡ Ac-

* James, in Tanner's Narrative, p. 338.

† Ibid. p. 341.

‡ Algic Researches, vol. i. pp. 19, 24.

according to Lafitau, the figures, which the Indians engrave on their faces and bodies, serve as hieroglyphic writings and memoirs.* When a savage has returned from war he will often paint his story upon bark or a blazed tree. He has characteristic marks which distinguish himself personally,—he traces his own figure, and adds other characters to explain his achievements and actions. His own hieroglyphic symbol, like a heraldic device, is painted on his body,—above his head he paints the thing which expresses his name,—at the side of the figure, he places the animals which are the symbols of his tribe and nation—the national symbol above that of his tribe;—and then succeed various signs, showing the number of his war party,—of the prisoners, and of those slain. The warriors are represented with their arms, or simply by lines—the prisoners by a stick ornamented with feathers, and other marks of slavery, and the dead by headless human figures. The same author remarks that he has seen many paintings of this description, and that in general all the Indians have a great number of symbols, and hieroglyphic figures of all kinds, which are to be regarded as a particular language, sufficiently ample, and supplied with many things in which writing is deficient. Charlevoix confirms this statement. It is the custom among some nations, he observes, for the chief of the victorious party, to leave on the field of battle his war-club, on which he has taken care to trace the mark of his nation, that of his family and his portrait; “that is to say, *an oval*, with all the figures he had on his face:” others paint these marks upon bark or on a tree, and “they add some hieroglyphic characters, by means of which those who pass by,

* Lafitau, *Mœurs des Sauvages Américains*, p. 44, etc.

may know even the minutest circumstances.”* The heraldic signs for the personal name, and for the totem or family name alluded to by these authors, was somewhat in the nature of a phonetic hieroglyphic — the name being pronounced upon seeing the sign : they also executed treaties by tracing these figures as their signatures. These symbols were analogous to the Mexican method of representing the names of persons and of cities ; when they represented a person, they painted a man or a human head, and over it, a figure of some real object expressing the meaning of his name.

The use of knotted cords, from which the method of communicating ideas, by means of belts or strings of wampum, was probably derived, was common to many tribes. They were employed by the Tlascalans,† a nation adjacent to the Mexicans ; and traces of them may be perceived in the Mexican symbols of enumeration. According to ancient traditions collected in Quito, the quippos were known to the Puruays long before they were reduced by the Incas. The prou, or quippos were used in Chile ; “the subject treated of,” says Molina, “was indicated by the color, and the knots designated the number or quantity.”‡ They were most extensively employed, however, in

* Charlevoix, *Voyage*, vol. i. p. 214 ; vol. ii. p. 17. Vide Loskiel *Hist. Mission Un. Brethren*, etc., p. 25.

† Clavigr., vol. i. p. 411.

‡ Molina, vol. ii. p. 24. Frezier adds, that they also employed persons to remember the history of the country, and to hand it down by tradition. Mr. Stevenson furnishes some original evidence of the use of the quippos by the Araucanians, in vol. i. p. 50, and mentions an instance of an old cacique, who was still able to translate them. Vol. ii. p. 269.

Peru, where each province had its knots, to assist the memory in the preservation of its annals and its traditions. Garcillasso gives a minute description of these records. They were composed of various things, he says, but most commonly of threads of different colors, suspended from a string, in the manner of a fringe. Each color had its particular signification,—the knots designated numbers, and by an arbitrary arrangement of both, the meaning of which was fixed, a complicated method of expression and calculation was attained.* These records were placed under the direction of the “Quipucamayus,” or masters of accounts, who composed a numerous body of public Registers. As the quippos were deficient in their power of expression in a connected form, and suggested merely isolated ideas, it became the duty of these officers to study their meaning and to transmit it by tradition. Thus, were preserved lists of the tributes which the Incas received, military rolls, the number of births and deaths and other statistical facts, laws, customs, the order of ceremonies, festivals and sacrifices, traditionary songs, religious fables, and all the events of their history :† it may be added that the quippos were considered as sacred.

In North America, according to Lafitau and Charlevoix, knots were also known ; but the use of the *wampum* as a species of record was of more extensive prevalence. The Delawares, upon one occasion, seem to have kept an account of time, by putting a bead of wampum every year on a belt

* Vega, vol. i. pp. 293, 294 ; vol. ii. p. 561.

† “The knots serve for divers passages and arguments of history ; and giving them only the subject, they will run on with a history as currently as a reader can with his book.—*Blas Valera*, in *Vega*, vol. ii. p. 561. Eng. Trans.

kept for that purpose,* and among many tribes, in the delivery of speeches, and the execution of treaties, belts were given, and preserved to perpetuate the remembrance of the transaction.† The Hurons and Iroquois had “in their public treasuries belts of porcelain in which were wrought figures,” by which means they recorded events. The beads of which they consisted, were of different colors, and were pierced and strung in such a manner, as to form a variety of figures and characters, understood by those to whose charge they were committed. As in Peru the colors had particular significations. The brown or deep violet was the most valuable, and intended something of serious import, white was the color of peace, red the emblem of war. Thus if it were designed to give warning of an approaching evil, or to send an earnest remonstrance, a black belt was delivered; if to declare war, a red belt wrought with the figure of a hatchet in white; if to signify peace, a black belt, with two hands joined in white. It appears that formerly other articles were used for this purpose besides beads; and like the quippos of Peru the wampum was considered as sacred.‡ “These strings and belts of wampum,” says Loskiel, “are also documents by which the Indians remember the chief articles of the treaties, made either between themselves or the white people. They refer to them as to public records, carefully preserving them in a chest, made for that purpose. At certain seasons, they meet to study their meaning, and to renew the ideas, of

* Beatty's Journal.

† Smith's Hist. New-York, vol. i. p. 74. The wampum was also used as a medium of exchange. Charlevoix's Voyage, vol. i. pp. 179, 180; vol. ii. p. 174.

‡ Loskiel, p. 28.

which they were an emblem and confirmation." "And as it is their custom to admit even the young boys, who are related to the chiefs, to these assemblies, they may become early acquainted with all the affairs of the state, and thus the contents of their documents are transmitted to posterity, and cannot easily be forgotten."*

5. *Traditions.* There is a great conformity in all the mythological traditions of the civilized nations; and even in those of the savage tribes, which appear to be ancient, there are general features of resemblance. Amid various details, they most usually imply a migration from some other country, contain distinct allusions to a deluge, and attribute the knowledge of such arts as they possess, to some fabulous teacher, in remote ages. In relation to the Indian origin, they appear to agree, with a few exceptions, in establishing that the course of population has been from the west to the east, the direction varying in some measure, according to the locality of particular tribes. With the great race called the Algic, or Algonquin-Lenape, there was a tradition of the original appearance or creation of the earth from water, and of a subsequent general inundation. According to Charlevoix, the Iroquois believed in a general deluge, from which no person escaped, after which, to repopulate the earth, beasts were changed into men. The Pawnees say that eight men were originally created by the Great Spirit, from whom all mankind were descended; and another tribe, besides a deluge, believed in the existence of an age of fire, which destroyed every human being, except one man and one woman, who were saved in a cavern. In South America, the Remos on the banks of the Ucayali suppose

* Loskiel, p. 28.

themselves to have been created out of the earth, by a man of miraculous powers. In Brazil, besides the usual belief in a general deluge, there was a tradition that in ancient times, before the age of violence, there were two persons, one of whom was called Zome,—in Paraguay, Payzume. Payzume is represented as an elderly man with a long beard, and who wore white garments. He came from the country of the Guaranies, that is, the east, before the days of their grandfathers, and wherever he sojourned, he taught the natives to clothe themselves, to live in houses, the use of fire, and to cultivate the mandioc. Their forefathers, as the fable ran, quarrelled with these benefactors and shot their arrows at them; but the arrows turned back, and slew those by whom they had been aimed; and Payzume fled to the north, promising to visit them again, and leaving his miraculous footsteps imprinted upon the shore.*

The nations of the Tamanac race say that Amalivaca, the parent of the Tamanacs, arrived in their country in a bark, at the time of the great deluge, which is called the age of water.† Amalivaca, sailing in his canoe, made the figures on the painted rocks of Encamarada,—some blocks of granite forming a species of cavern are denominated his house,—and a large stone of regular form, his drum or instrument of music. He had a brother, who assisted him in giving the surface of the earth its present form. His daughters were fond of travelling, and he broke their legs to prevent them. After having regulated all things on that side of the great water, he embarked and re-

* Southey's *Hist. Brazil*, vol. i. p. 229.

† Humboldt's *Pers. Nar.*, vol. v. pp. 596, 597, etc.; vol. iv. pp. 473, 474.

turned to the other shore. The name of Amalivaca is found spread over a region of more than five thousand square leagues, and he is termed the "Father of Mankind," or our "Great Grandfather," even by the Caribbees, who, however, style him Amarivaca. At this deluge, all the Tamanacs were destroyed except one man and one woman, who saved themselves on a mountain near the banks of the Asivera, and who, casting behind them, over their heads, the fruits of the *Mauritia* palm-tree, saw the seeds contained in them produce men and women, who repeopled the earth. These traditions are current among the Tamanacs, the Maypures of the Great Cataracts, the Indians of the Rio Erevato, and all the tribes of the Upper Orinoco.

In Chile, on a mountain called Theghin, or Theg-theghin, (which means, to crackle or sparkle like fire,) the aborigines say that their early progenitors escaped from the deluge. There is a word in common use among them, says Molina,* meaning "the great ancestor," or "our great ancestor," or "the renowned," which is hardly to be distinguished from Shem; "Fébrés spells it Them, but as the *th* is frequently pronounced it would sound like Chem."

The Muyscas, the ancient inhabitants of New Grenada, related that in the remotest times, they lived like barbarians; when from the plains to the east of the Cordilleras, there came an old man with a long flowing beard, who was known by three appellations, one of which was Bochica. He taught them the arts, the worship of the sun, the cultivation of the earth, and to clothe themselves. His wife Huythaca, who was extremely beautiful, and less benevolent than her husband, swelled the

* Molina, vol. ii. p. 400.

river and caused the valley of Bogota to be inundated. All the natives perished, save a few who were preserved on the mountains. Huythaca was driven by Bochica from the earth, and became the moon;* and the old man, after draining the valley, by breaking the rocks which enclosed it, retired to the holy valley of Iraca, where he lived austere for two thousand years.

In ancient times, says Garcillasso, the whole country (of Peru) was occupied by natives of brutal habits, who went naked, subsisted upon roots and herbs, and lived in caverns. The Sun, perceiving their degraded condition, was touched with compassion, and sent from heaven his two children, Manco Capac and Mama Oello, to instruct them in the arts of humanity and religion, to teach them to cultivate the earth, to build houses, and weave garments.† In another tradition it was said, that after the deluge there came from the lake Titicaca, a being or god, whom they styled Viracocha, who first went to Tiahuanaco, and thence to Cuzco where he commenced the work of civilization.‡ The Inca Viracocha, who was named after this deity in consequence of a dream in which the god appeared to him, described him as having a white shining countenance, a long beard, and flowing garments.

In Mexico, all improvements were ascribed to Quetzalcoatl, a white and bearded man, who, clothed in a black robe, appeared from Panuco, upon the shore of the Gulf of Mexico. He was high-priest and legislator, and instructed the inhabitants of Tula and Cholula, where he was held in extreme veneration. His was the golden age and era of peace; he in-

* Hum. Res., vol. i. pp. 72, etc.

† Vega, vol. i. p. 34.

‡ Acosta, in Purchas.

vented the art of cutting gems, and casting metals, and taught them the ceremonies of their religion, and the regulation of the seasons and calendar. The great spirit Tezcatlipoca offered him a drink which made him immortal, and inspired him with a desire of visiting the distant country, Tlapallan; he then went to the east, and disappeared upon the coast.

In Chiapa, it is said, there was a tradition of one Votan, who was present at the building of the great tower, when mankind received different languages; and who was then commanded to people and make a division of the lands of Anahuac. In one of the Mexican picture writings, there is a delineation of the Mexican Noah or Coxcox, who with his wife was saved in a canoe, and finally, upon the subsidence of the flood, was landed upon a mountain called Colhuacan. Their children were born dumb, and received different languages from a dove upon a lofty tree. The natives of Mechoacan had a tradition, which, if it be correctly reported, accords most singularly with the narrative of the Noachic deluge. They say, that at the time of the great deluge, Tezpi embarked with his wife and children,—taking with them various animals, and several seeds of fruits,—in a calli or house. When the waters began to withdraw, he sent out a bird called *aura*, which remained feeding upon carrion. He then sent out other birds that did not return, except the humming-bird, which brought a small branch in its mouth.*

6. *Methods of interment.* The superstitious reverence of the Indians for the dead, has tended to preserve a great uniformity in their methods of interment. No better evidence of the depth and

* Clavig., vol. i. pp. 87, 106, 244; vol. ii. p. 204. Hum. Res., vol. i. p. 29; vol. ii. pp. 64, 65, 66. Del Rio, pp. 31, 54.

power of this feeling can be exhibited, than in the custom which was oftentimes practised, of interring the deceased in their very dwellings. The Mexicans frequently buried the dead in the courts of their houses; some of the ancient and modern tribes of South America used their houses as places of interment, and we may trace the same practice among the Charibs, the Choctaws, Creeks, Chickasaws and other southern tribes of North America. The same anxious desire to preserve the remains of the departed may be perceived in the habit of embalming, which was customary with such nations as possessed sufficient knowledge for that purpose. The custom of interring or exposing the bodies upon scaffolds, until the flesh could be cleansed from the bones, which existed among many tribes, may be attributed to the same motive. But the most striking conformity in funeral rites may be observed, in the peculiar position which was given to the body upon interment. The Mexicans placed it in the tomb "*in a sitting posture*:" the same disposition of the corpse is observed in the Peruvian graves and *huacas*, and in the ancient graves of the United States: it was common also to the Patagonians, the Guaranies, the Puris, Coroados, Tupinambas, Botocudos and Mongoyos of Brazil, and the Muyscas of New Grenada; to the Charibs, the Choctaws, the Creeks, the Arkansas, the Alibamous, the Omahaws, the Mandans, the Iroquois, and to most of the numerous families of the great and wide-spread Algonquin-Lenape race.*

* King and Fitzroy's *Voyages*, vol. ii. p. 155. Dobrizhoffer, vol. i. p. 139. Southey's *Hist. Brazil*, vol. i. p. 248. Spix and Martius, vol. ii. p. 250. Henderson's *Brazil*, pp. 99, 109, 305. *Arch. Am.*, vol. i. p. 378. Adair, p. 182. Charlevoix's *Voyage*, vol. ii. p. 142. Col-

7. *The maize.* No fact is more remarkable in the history of Indian civilization, than the extensive diffusion and cultivation of the maize. In South America it is found, together with other useful plants, in regions where it cannot be indigenous. In the other continent, though it is manifestly the native production of a warmer climate, it was cultivated by tribes inhabiting very high latitudes. In Massachusetts, there was a clear and distinct tradition, that it had been obtained from the "south-west;" and in New York, it was said to be the gift of "the southern Indians, who received their seed from a people who resided still further south;" and before its introduction they fed upon roots and the bark of trees.* It cannot be denied, that in South America the progress of civilization may be traced from north to south, and in North America in the contrary direction. Every thing seems to point to the plains of Peru, and of New

den. Van Der Donck's New Netherlands, in Coll. N. Y. Hist. Soc., vol. i. N. S. p. 201. This subject attracted the attention of Dr. Morton, in his *Crania Americana*, from which work several instances noted in the text have been taken. Perhaps some clue to the origin of this curious custom, may be gathered from the hint contained in the following extract from Charlevoix. Believing, as the Indians generally did, that death was but a passage to another life, and as it were, a second birth, it is possible that the position of the corpse, when placed in the grave, was originally intended to be emblematic of their ideas upon that subject. "The dead body," says that author, "dressed in the finest robe, with the face painted, the arms and all that belonged to the deceased by his side, is exposed at the door of the cabin, in the posture it is to be laid in the tomb; and this posture is the same, in many places, as that of the child before its birth."

* Mass. Hist. Soc. Coll., vol. iii. p. 219. Van Der Donck's New Netherlands, in Coll. N. Y. Hist. Soc., vol. i. p. 137.

Spain as the two radiating points of the arts, and perhaps as the sources of all the aboriginal population.*

7. *Customs.* At the time of the discovery, the smoking of tobacco was a custom prevalent among nearly all the Indians of both Americas; and the sacred character of the calumet, with the ritual ceremony of smoking to the sun and to the cardinal points, was almost equally general. The practice of cutting off the heads of those enemies who had fallen in battle, and of scalping; the habits of eradicating the beard, shaving various parts of the head, and of cranial compression, were common to many native families of both continents; and finally, in the institution of clan-ship, observable in South, as well as in North America;† in the domestication of the dog, and the use

* It may be interesting to see the extension of the use of copper. The Peruvians, Mexicans, and perhaps the Mound-builders, were acquainted with the art of hardening, and fabricating instruments of that metal. Acosta says the Indians used copper weapons.—*Lib.* iv. c. 3. The natives of Chile, says Molina, made use "of the bell-metal copper which is very hard; of this they made axes, hatchets and other edged tools."—*Molina*, vol. ii. p. 21. Fernando de Soto saw axes of copper in Florida, "which they said was mingled with gold."—*A Relation of the Invasion and Conquest of Florida*, etc., p. 75, cited in *Am. Phi. Tr.*, vol. iv. p. 202,—and Garcillasso de la Vega confirms this statement. Captain Smith, Verazzano, and other early voyagers observed articles of wrought copper in general use for ornaments and other purposes, by the Indians along the North American coast. The Caracoli of the Charibs is thought to have been composed of copper, and silver and gold.—*Sheldon*, in *Arch. Am.*, vol. i. p. 398. The inhabitants of New England appear to have possessed and manufactured "chains, collars and drinking cups" of copper.—*Brierton*, in *Smith's Travels*, vol. i. p. 107.

† Dobrizhoffer, vol. ii. p. 440.

of that animal in sacrifices ; in the custom of tatooing ; in the semi-mythological method of explaining eclipses ; in the practice of piercing the lips and ears, and wearing ornaments in the apertures ; in the preparation of intoxicating liquors from native products, and in the use of vapor-baths,—we discover analogies, not universal, but, in connection with other proofs, sufficiently forcible to favor a belief in the relationship and common descent of all the tribes, barbarous and cultivated. The most usual objection opposed to this opinion, is the great diversity of the native languages, but it is just such a diversity as might be anticipated, were the epoch of the dispersion of this race placed at a very early period : while, on the other hand, the general resemblance of all the languages, in their structure, is explicable only upon the supposition of their common origin at some such remote age. Upon instituting a comparison on other points, the great family likeness that prevails in all the customs and institutions, from the Fuegians to the Esquimaux, can be owing neither to accident, nor to the operation of the same natural causes and influences ; it is often arbitrary, and unless traced to an ancient affiliation, exhibits a most extraordinary phenomenon.

CHAPTER III.

ABORIGINAL MIGRATIONS.

IN the examination of the ruins in North America, the traditions connected with them, and their localities, those in the southern portion of the continent present undoubted claims to the highest antiquity. We there trace the strongest and most decisive marks of a primitive people, in monuments and institutions of a primeval character closely allied to the type of ancient civilization upon the old continent. Conceding Asia to have been the birth-place of man, the first seats of a colony from the eastern hemisphere, must be sought upon the shores of the ocean. The claims of Florida to this preference have already been examined. On the west and north-west the ruins in the United States are limited, and nowhere along the shores of the Pacific until we reach Mexico, are there any relics of antiquity; but as we penetrate further to the south, we find these ancient memorials increase, until arriving at that region, which stretches from the Pacific Ocean to the Gulf of Mexico, we find a territory, teeming with the vestiges of a great people, rich in stupendous monuments, and abounding in proofs of an ancient, and a *primitive* population. Here, therefore, are we compelled to place the first abode of the civilized nations—the original centre, whence population was diffused and radiated, through the immense regions of the north. But here we perceive, also, traces of many national changes, revolutions and

migrations, the precise order, succession and history of which, it is impossible to indicate. Two distinct epochs, however, may be observed, denoted by some peculiar features in architecture, institutions, and traditions. The first, which has sometimes been called the age of the Toltecs, was characterized by many of the distinctive forms of primitive civilization and by a mild religion. In this era the vast terraced pyramids of Cholula and Teotihuacan were erected, and even then were in existence, those mythological fables, and those systems of astronomy, and hieroglyphical painting, which were common to most of the nations of Anahuac, Guatemala and Yucatan. The ruins of Palenque, Copan, Mitlan and Uxmal, not only present many mutual analogies, but are closely related by numerous characteristic features to those of Mexico ; they appear however to be the most ancient, or rather to be the productions of the most ancient people, and not to have been of Aztec origin. When the Toltecs, who led the van of the great Aztec migration from the north, settled in Mexico, they are said to have found it inhabited by the Olmecas or Olmees, a nation to which the learned Siguenza ascribed the construction of the pyramids of Teotihuacan. At the south, the Mixtecas and Zapotecas, who spoke original languages, and in whose vicinity the ruins of Mitlan are found, appear also to have been ancient nations. The Toltecs in their next movement passed into Guatemala, which was occupied by civilized tribes, speaking idioms unlike the Aztec ; and there left traces of their invasion in some remains of their language. They do not seem however to have proceeded into Yucatan, for the Maya tongue which pervades that peninsula, and penetrates even into Guatemala, contains no Aztec words. It appears

clear, therefore, that even before the arrival of the Toltecs there were many civilized nations inhabiting this territory ; and yet we are forcibly struck with the resemblance which existed between the arts, religion and institutions of these original inhabitants, and those of the northern invaders. For example, in Yucatan, where there cannot be the least suspicion of a Toltec migration, the ancient Maya calendar, like the Mexican, was divided into eighteen months of twenty days ; as appears from the ruins of Uxmal, some of the astronomical symbols, and four of the hieroglyphical signs of the days are identical with the Mexican ; and the day seems to have been divided into eight intervals.* The Mayas had also their picture writings called "Analthes," which were written upon bark, folded up into books like those of the Aztecs. Their mythological traditions were somewhat similar, and their great legislator Zamana, like Quetzalcoatl, appeared from the east. The greatest dissimilarity exhibited, is in the style of architecture, but the Yucatanese displayed a preference for the pyramid in their sacred edifices, and as the Aztec, it was built so as to correspond with the cardinal points. The same method of sacrificing was common to both nations ; and in the Maya delineations of the human countenance, may be observed the receding facial angle, prominent nose and protruding lip, which are remarkable in the paintings of the Aztecs. Waldeck has instituted a comparison between the ruins of Palenque and Uxmal, and demonstrated many features of resemblance.† Del Rio also observed, that the identity of the ancient inhabitants of Yucatan and Palenque is evidently proved by the strong analogy of their cus-

* Waldeck, p. 39.

† Ibid. p. 19, etc.

toms, buildings, and acquaintance with the arts,—a conclusion which conforms to a tradition of a migration into Yucatan from the west.* The Chiapanese claimed to be the most ancient of nations, and yet their calendar, like the Mexican, was divided into eighteen months of twenty days; and, in common with the Mixtecas and Zapotecas, they used hieroglyphical paintings, and possessed a mythology somewhat similar to the Aztec. It would seem, therefore, that in the first age population was diffused through the regions of the north, to return by one of those refluxes, which were common in the early periods of history. Accordingly, the second epoch was marked by the appearance of numerous tribes, which, during the long series of ages they had been separated from their parent stock, appear to have acquired a fierce, unruly and warlike disposition, and some of them to have fallen away in a measure from their ancient civilization, though they had still preserved a striking resemblance to their ancestral nations. These tribes, it is conceived, were the authors of the mounds, and mural remains in the United States. Their migrations were recorded in the hieroglyphical paintings, and, according to the received computations, occurred at successive dates, ranging from the middle of the seventh to the end of the twelfth century. The Toltecs, the first of these bands, left their former residence, called Huehuetapallan, A. D. 544. They proceeded in a southerly direction, and, after a journey of one hundred and four years, arrived in the neighborhood of the city of Mexico; where, after a brief interval, they founded the city of Tula or Tollan. They brought with them paintings, representing the various events of their long pilgrim-

* Del Rio, p. 8.

age, from which the astrologer Huematzin there compiled his "Divine Book" in the year 660, containing, besides the history of the nation, the principal features of their knowledge and institutions.* In the year 1170 appeared the Chichimecs, and in 1178 the Nahuatltecs. The Acolhuas and Aztecs ended this series of migrations in the year 1196, having proceeded likewise from a northern country, denominated Aztlan. All of these tribes, inclusive of the Toltecs, were of the same descent, and spoke the same language, and had occupied the same territory. This identity of origin appeared also in the similarity of their institutions and religion, and in their close physiognomical resemblance.

The etymology of Aztlan appears to denote a country of water, a topographical description of their former residence, confirmed by the history of their migration, as represented in the hieroglyphical manuscripts,—particularly that at Berlin. We there perceive indications of that territory in the delineation of marshy lands; prints of feet are also observed, exhibiting the approach of hostile bands,—arrows shot from one bank of a river to another, and combats between two different people,—the one armed with the Aztec shield, the other naked and without armor. In another of these pictures, the conflicts are represented as taking place with a savage race clothed in

* Humboldt's Res., vol. i. p. 205. Hum. Pol. E., vol. i. p. 100. The name of Anahuac applied by the Mexicans to the valley of Mexico, signifies "near to the water." The Aztecs were said to have brought the name of their former country with them, and this designation possibly relates likewise to their ancient locality.—*Clavig.*, vol. i. p. 1.

skins. The paintings imply generally, that these migrations were made from the north, and it became an object with those interested in the investigation of the origin of these nations, to discover some vestiges in that direction, by which their route might be traced. Accordingly, it was soon ascertained that some tribes in the vicinity of the Rio Gila retained remnants of a former civilization;* and, in fact, upon the banks of that river the missionaries succeeded in finding the ruins of an ancient city, which they denominated "Casas Grandes." These remains covered an area of more than a square league, and they seemed analogous to the edifices constructed by the Mexicans, at the south. This was then decided to be the second abode of the Aztecs, as represented in the paintings; the third was readily found nearer to Mexico, in the former intendency of New Biscay; and as to the first, it was supposed to exist somewhere near the shores of lake Timpanogo. By this interpretation, the original country of the Aztecs was placed far to the west; but a more accurate knowledge of the regions in the vicinity, and to the north and east of the Rio Gila, has demonstrated the unsoundness of this conjecture.

That civilization, in diverging from its central position in Mexico, was carried along the shores of the Pacific, is highly probable; indeed, traces of the Mexican language have been perceived among the maritime tribes occupying very high latitudes. But, in proceeding north from the Rio Gila, these vestiges become faint; and it is certain that, in the whole extent of that region, no ruins have been discovered that indicate the former locality of a cultivated people.† The very character of

* Venega's Hist. California, vol. i. p. 58; vol. ii. 184.

† Gallatin, in Arch. Am., vol. ii. p. 146.

the country is opposed to such an idea; for, north of the Rio Gila, there stretches an immense sandy desert, of too sterile a character for the subsistence of an agricultural population. To the east of the mountains, however, and in a more direct line of communication with the United States, there are ancient remains which seem to connect those of our western country with the Mexican. There can be little doubt that, if the existence of the monuments in the United States, and their decided analogy to those of New Spain, had been known to those who first interpreted the Aztec paintings, they would have united in placing ancient Aztlan in some of those rich valleys of the West where the memorials of an exiled race still abound.

In the further pursuit of this inquiry, it may be useful to inquire whether any of the Indian traditions tend to elucidate the question of the origin of the mounds and mural remains. The southern Indians state, that when their ancestors migrated from the west, they found these ruins deserted, and that the tribes which they dispossessed had also observed them, upon their first occupation of that country. The Creeks, Cherokees and Seminoles are all united, in attributing their erection to the ancient and unknown inhabitants, without any definite tradition upon the subject.* Indeed, their origin is an entire mystery to most of the present Indian tribes,—a circumstance by no means surprising, when we reflect that they were not acquainted with any accurate and permanent method of recording events. There is an old Delaware tradition, which, whatever may be its other claims to consideration, merits attention, as being the only detailed narrative connected with the history of the Mound-builders, and for its congruity with the traditions of the

* Bartram's Travels, p. 365.

Iroquois. They related, that the great race of the Lenni-Lenape, many centuries ago, inhabited a country far to the west. Upon migrating eastwardly, they found the territory east of the Mississippi occupied by a numerous and civilized people, whom they denominate the Alligewi,—and who lived in fortified towns. The Indians made an application to pass over the river, and through their country, to the eastward; which request, though at first refused, was subsequently acceded to, under directions to make no settlements until they had passed the Alligewi boundaries. In accordance with this permission, that tribe made the attempt, but during the passage of the river was attacked, and driven back. Upon this a league was struck with the Iroquois, who had also emigrated from the west, and reached the river at a higher point; and the combined forces of the allied tribes assailed the Alligewi so fiercely, that, after suffering severe losses and numerous defeats, to escape extermination, they finally fled down the shores of the Mississippi. The vast and beautiful territory, thus abandoned to the conquerors, was divided between them; the Iroquois selecting the district upon the borders of the great lakes, and the Lenni-Lenape, an extensive tract of land lying further to the south and towards the Atlantic. One of the Iroquois tribes, the Senecas, relate that at a very distant era, the country about the lakes was occupied by a powerful and populous nation, who were destroyed by their ancestors.* Several of the most beautiful, and the richest locations of the six nations, are stated by them to have been inhabited and cultivated† before their arrival, by another people whose burial

* Yates and Moulton's Hist. New-York, p. 40.

† Life of Brant, vol. ii. p. 487. Ibid. vol. ii. 486.

places they distinguish from their own. The tradition they have received of these ancient inhabitants from their fathers, states that they formerly occupied a wide extent of territory, and were eventually extirpated by the Iroquois, after long and bloody wars. It is added in detail, that the last fortification was attacked by four of the tribes, who were repulsed; but the Mohawks having been called in, their combined power was irresistible, the town was taken, and all the besieged destroyed. The conformity of these traditions to the vestiges of civilization at the west, and to the Mexican narratives, as contained in their paintings, entitles them to more weight than they would otherwise deserve. They proceed also from nations, which from their numbers, their extensive diffusion over a wide region, and some features in their customs and character, appear to be among the first and most ancient occupants, after the country was abandoned by its former inhabitants. The Algonquin-Lenape and Iroquois seem to have been borne upon the first wave of that tide of migration from the west, which probably swept before it the Aztecs and Toltecs; and the former were precisely in that position, where we should expect to find the foremost of the invading hordes,—at the east, and along the shores of the Atlantic. It is unnecessary to examine minutely the native traditions, to prove the direction of these migratory movements; for no fact is more clearly established, than their universal agreement in tracing their origin to the west—or south-west. These facts, in connection with those which have been exhibited, as proving the common origin of all the aborigines, favor the conclusion that the original source of population is to be placed in Mexico and Central America; and the vestiges of civilization observed among the Natchez and other

nations, the traditions of a period, when many tribes were more cultivated and numerous than at present; the evidences which exist of important alterations in their dress,* customs and religion, and of a declension in the arts, since the discovery, all tend to confirm this idea. The exceptions, if any, which exist, are chiefly confined to some western and northern tribes, to which, an Asiatic origin by Behring's straits and the Aleutian islands, may with some plausibility be ascribed.

South America. In endeavoring to trace out some facts in the ancient history of Peru, it is essential to guard against an implicit reliance upon the authenticity of all those narratives, which have been furnished by Garcillasso de la Vega. To exalt the dignity and glory of those "Children of the Sun," whose descendant he claimed to be, appears to have been the prominent purpose of this historian, and with artist-like skill every object has been made subservient to the main design. Though he admits that the history of ancient Peru was divided into two ages, in the first of which the edifices at Tiabuanaco were erected, he yet denounces the state of society then existing, as barbarous, and attributes all civilization to the advent of the first Inca. Well aware, however, that many of the tribes conquered by those sovereigns, were not at the time of their subjugation, in so degraded a condition as he has drawn of the first age, he concedes that some of the natives were more cultivated, and amongst other admissions, that they possessed a more rational religion, and worshipped such things as seemed to be of use and profit, as fire and the maize. And yet in the recital

* "The savages of the Northern America, *as their ancestors report*, have always gone clothed, even before they had any commerce with the Europeans."—*Hennepin*, vol. ii. p. 79.

of the tradition of Manco Capac, we are told that he introduced the worship of the Sun, the cultivation of the soil,—and his wife, the weaving of cloths. From an examination of the contents of many of the *huacas*, which existed in districts unconquered until a very late period, there can be little doubt that there were many tribes who possessed these arts, independent of the Incas ; and the ruins of cities and other monuments of an epoch probably before the age of the Incas, confirm this view. The *huacas* on the plains of Del Chimu, near Truxillo, were built by the subjects of the Grand Chimu, a prince reduced by Yupanqui, the son of Pachacutec the Ninth Inca : and yet the articles exhumed from these mounds, indicate customs and arts analogous to those of the Peruvians proper ; and more treasures and curious antiquities have been found in them, than in those of any other of the Peruvian valleys.* How is this inconsistency to be reconciled ? Are we to consider the tradition of Manco Capac as an idle invention of later times ? So bold an idea could scarcely be ventured ; but as it has already appeared, that the same ancient tradition under other forms was common to many of the aboriginal nations, so, even Garcillasso affords evidence of its existence among the very tribes he brands as uncivilized. The Indians to the south and west of Cuzco, he observes, say that after the waters of the deluge had subsided, a certain man appeared in the country of Tiahuanaco. He divided the world into four parts which he gave respectively to four kings, the first of whom was Manco Capac, who proceeded to the north, arrived in the valley of Cuzco, founded a city, and subjugated, and instructed the neighboring people.†

* Stevenson, vol. ii. p. 121. Ruschenberger, p. 381.

† Vega, vol. i. pp. 39, 40.

The Indians who lived to the east and north of Cuzco, he adds, report another origin. They say, that at the commencement of the world, four men and four women who were brothers and sisters, proceeded from windows in certain rocks near Cuzco. These windows were three in number; the first of the brothers was Manco Capac, and his wife Mama Oello. Now it is evident from both these traditions, that the epoch of the appearance of Manco Capac was carried back to the time of the deluge, and it is not surprising that, as the same historian informs us, some curious Spaniards considered these fables as referring to that great event, and "to the four men and four women whom God saved from the universal deluge."

The tradition of Manco Capac, therefore, seems most evidently to have been a primitive one, of which some enterprising Peruvian sovereign judiciously availed himself, to secure the allegiance of his new subjects: indeed this author admits that Manco Capac was some ambitious "*Indian*." In the early ages a divine origin was claimed by many lines of sovereigns, and the title of "Children of the Sun" was not peculiar to the Peruvian kings. We are to consider civilization, then, as having existed in South America, prior to the foundation of the empire of the Incas. It has already been traced over a vast region by the ruins of ancient monuments still visible, and it appears to have flourished principally along the borders of the Pacific.

It is an interesting question, whether any traces of connection can be discovered, on the north, between the cultivated nations beyond the Isthmus of Darien, and those of South America. Was the chain broken, in this direction—was the continuity of civilization interrupted by the intervention of barbarous

tribes? Clearly not, if we are to credit the early accounts. Indeed, at the conquest, the Spaniards found in Panama large Indian towns governed by Zaques or Princes; at Darien and other places, they discovered a semi-civilized population, who cultivated the soil, were clothed in cotton garments, and were rich in gold, pearls and precious stones; and here they received the first intimation of the existence of the empire of the Incas. Blas Valera* says that the Antis, a tribe who worshipped the Sun and sacrificed human beings, had migrated from Mexico, peopled all the countries of Darien and Panama, and thence passed along the mountains of New Granada. A curious corroboration of this fact is afforded in the precise resemblance between one of the Indian dances still practised at Angostura, on the Magdalena, about six degrees north latitude, and another customary in Yucatan.

In Yucatan, says Clavigero, they fixed in the earth a tree or strong post, fifteen or twenty feet high, from the top of which, according to the number of dancers, they suspended twenty or more small cords, all long and of different colors. When each dancer had taken hold of the end of his cord, they all began to dance to the sound of musical instruments, crossing each other with great dexterity, until they formed a beautiful network of the cords around the tree, on which the colors appeared checkered in admirable order. Whenever the cords, on account of the twisting, became so short that the dancers could hardly keep hold of them with their arms raised up, by crossing each other again, they undid and unwound them from the tree.† The following is the description of the Indian dance at Angostu-

* In Vega, vol. i. p. 25.

† Clavigero, vol. i. p. 401.

ra,—“the pole-dance,—so called from the production of a pole about ten feet high, and about four or five inches in circumference. At the head is a round ball or truck, immediately under which are fastened twelve different-colored and various-striped pieces of French tape, about half an inch broad, and about twelve feet, each piece, in length. The pole being kept perpendicularly supported, each Indian lad lays hold of a line of tape, which is drawn to its full length, the whole forming a large circle around the pole, one regularly covering his companion in front. At a signal from the chief, the music strikes up a favorite tune, and the circle becomes in motion, half of the performers facing to the right about. On the second signal, each step off, and meeting each other, pass on in succession right and left, and so continue, until the twelve lines of tape are entwined in checked order, from the top to the bottom of the pole, and so regular is the appearance, that it would be difficult to find a flaw or mistake in it. A halt for the moment takes place, and the same process is renewed to unwind the tape, which is as regularly completed as before, by inverting the dance and leading from left to right.”* But, still further to the south, we find other analogies. The Araucanians worshipped the Sun and Moon, and their sacrifices were similar to those usual in New Spain. They consisted in opening the breast, and tearing out the heart of the victim, while yet alive, and in sprinkling the blood from the heart towards the sun.† Vega describes an analogous custom among some of the Peruvian

* Hippisley's Narrative of the Expedition to the Rivers Orinoco and Apure, p. 312.

† Frezier's Voyage, p. 64. Graham's Chile, appendix, pp. 427, 429. Molina, vol. ii. p. 71.

tribes, before the era of the Incas. The method was, he says, to open the body while the victims were still alive, to take out the heart, which was burnt, and with the smoking blood to besmear the idols.* It may be added, that the Mexicans and Peruvians used the same kind of swinging bridges, which have been considered as peculiar to Peru.

The Olmecas or Olmecs, it has been supposed, were among the most ancient inhabitants of New Spain, and preceded the Toltecs in the occupation of that country. Boturini, who had made diligent researches into the ancient picture-writings, conjectured that they fled to the Antilles or to South America, when they were expelled from their ancient territory. The Toltecs, according to tradition, were overwhelmed by a great famine about the year 1052, and some of them passed to the south-east into Guatemala; and, by the existence of the Mexican language in Nicaragua, we may trace them still further. It is a curious coincidence, and perhaps no more, that about the same period the foundation of the Peruvian empire was commenced. In any event, analogies have been developed between the most ancient style of architecture in Peru, Mexico and North America, between the customs, religion and other institutions of all the aborigines, and between the primitive traditions of all the civilized nations. In connection with the evidences of migration into South America, these facts may perhaps afford a basis for a reasonable conjecture, that the first seat of American civilization was in Central America: that from the first colony there planted, population was diffused northwardly into the United States, whence, at a subsequent period, the tide of emigration

* Vega, vol. i. p. 24.

rolled back ; and southwardly, along the Cordilleras, into South America : and that at this remote period, various tribes, rapidly declining in civilization as they separated from their parent stock, expanded over the vast territory stretching before them in both continents, until the whole western hemisphere was peopled by one great race.*

* Upon an old map, contained in an edition of Vega published 1737, the country in the "Audience de Panama" is marked as "ancient Peru." Another indication of the southerly course of migration is afforded in the Fuegian language, which it is said resembles the Araucanian.—*Voyages of King and Fitzroy*, vol. ii. p. 188.

CHAPTER IV.

THE ROUTES OF MIGRATION.

THE course of the preceding argument has conducted us to the threshold of that vexed question,—the origin of the aborigines. The first step towards a solution of this problem involves an inquiry into the routes, by which a colony may have reached our shores, and the feasibility of such a migration in the early ages of the world. In the examination of the routes, attention is first attracted to that point where the two hemispheres approach each other,—the straits of Behring. This narrow body of water, the shores of which are only thirty-nine miles asunder, opposes no barrier to the communication between Asia and America. The passage, which is facilitated by the interposition of three islands, the St. Diomedes, is frequently made by the Tchutski, in their hostile incursions against the American natives; while the latter are occasionally found upon the Asiatic side, vending their furs to the Russian merchants. Indeed, the first intelligence of the proximity of the two continents was derived from the Tchutski, so early as the middle of the seventeenth century; at which period they often crossed the straits to trade with the Americans.* Further to the south, the Aleutian islands, which commence near the promontory of Alaska and range in a south-westerly direction towards the coast of Kamschatka, are occu-

* Coxe's Russian Discoveries, p. 294.

pied by native tribes who find no difficulty in passing from island to island in their baidars.* The climate of the country in the vicinity of the straits appears to have been an insuperable obstacle to the existence of civilization, and the inhabitants generally have reached the lowest stage of humanity. For a vast distance along the shores, quite into the interior of *both* continents, we find no vestiges of a cultivated people; and though by this route barbarous tribes may have passed into America, it seems beyond the range of all probability, that civilized nations should have found their way from Central Asia to Central America through these cold and remote regions.

From the difficulties attendant upon the supposition of a migration by Behring's straits, refuge has been taken in two theories, originated many years since, maintaining the former existence of large bodies of land in the Atlantic and Pacific oceans, connecting our continent, on either hand, with Europe and Asia. Of these conjectures, the one possessing the greatest probability, and justified in some degree by ancient traditions, relates to the island Atlantis. In the dialogues of Plato entitled *Timæus*, the voyage of Solon to Egypt is referred to, and certain conversations recited, which took place between him, and the priests of an ancient temple in the Delta. Alluding to some old Egyptian records, they related to the Athenian lawgiver, that many deeds of his countrymen, there recorded, were truly admirable,—but one surpassed all others in magnitude and excellence. For the writings mentioned, that a great power, proceeding out of the Atlantic ocean and spreading itself over Europe and Asia, was checked by the arms of the Athenians.

* Coxe, pp. 75, 103.

It came from the island Atlantis, lying in the ocean, before the straits, called by the Greeks the Pillars of Hercules. This Atlantis was larger than Lybia and Asia together, and from it there was a passage to other islands, and from these *to a continent beyond*. The combined power of the kings of Atlantis was mighty and wonderful. Having conquered all that, and many other islands, and parts of the continent, Lybia as far as Egypt, and Europe as far as Tyrrhenia, they undertook to subdue Greece, Egypt, and all the country within the straits. Athens then became eminent for her valor and strength, and, though deserted by the other states, met the approaching enemy, overturned their trophies, saved the free from impending slavery, and restored freedom to those already subdued. But in after times, floods and earthquakes taking place, in one dreadful night and day, the island Atlantis sunk into the sea, and disappeared; and, for many ages, the ocean there could not be navigated, owing to the numerous rocks and shoals with which it abounded. In the Critias, and various other portions of Plato, this lost island is again alluded to, and frequent references are made to it in subsequent classic authors. From a consideration also of the ancient mythology, according to which, Atlas was descended from the Ocean, and married Hesperis or the West, from which union proceeded the Atlantides, it will be perceived this tradition is more ancient than Plato, being interwoven with the religious fables of the Greeks. Homer's Atlas coincides with this tradition,—having its lofty pillars reaching from heaven to earth, and its foundations laid in the depths of the ocean. The garden of the Hesperides, synonymous, according to Diodorus, with the Atlantides, was in the neighborhood of Atlas, and the Elysian fields are described as an enchanting

country situate far to the westward, beyond the sea. Hesiod speaks of Atlas in a similar style, and as a neighbor to the Hesperian nymphs. Antæus, the son of Atlas, who founded Tangier on the African shore of the straits of Gibraltar, is related to have defended himself against the attacks of Hercules with great vigor, and having sent abroad for assistance, it is said that he received new strength from his parent, as often as he touched the ground. The language of this fable seems manifestly to refer to aid derived by maritime armaments from Atlas, which became effective only when they had reached his shores. The Cabiri also, according to Sanchoniatho, have recorded that Atlas was buried alive by his brothers, a story alluding, perhaps, to that sudden submersion so minutely described by Plato.

It has been maintained, and with much learning and ingenuity, that the peak of Teneriffe was the original Mount Atlas, and that the Greeks, inferior to the Phenicians in maritime skill, probably never saw the Canaries, and in their ignorance, sought for Mount Atlas on the western coast of Africa. This error, if it be one, is as remote as Herodotus, and was adopted by Strabo and Ptolemy, who in their turn transmitted it to the modern world. That the Canary islands were inhabited at a very early period, appears from the testimony of Pliny, who states that vestiges of an ancient population still existed there in the ruins of edifices. The well known facility with which names were transferred, in ancient geography, from one country to another, in consequence of the migration of its inhabitants, may perhaps authorize the supposition that after the disappearance of the Atlantic island, its name was appropriated or confined to those islands nearer the shores of Europe, and thence

was carried into Africa by subsequent emigration. The Guanches, the aboriginal population of the Canaries, in their customs, the habit of embalming the dead, and their language, exhibit striking affinities to some nations of Africa. Herodotus describes the Atlantes, a nation living in the vicinity of Mount Atlas, and the Berbers, their modern descendants, are strongly distinguished from the surrounding tribes, by their physical appearance, reddish complexion, and language analogous to that of the Guanches.*

It may be conjectured then, that the traditions narrated in Plato, were obtained from these islands, or perhaps from the tribes in Africa we have alluded to, and thus communicated to the Egyptians and Greeks, and incorporated in their mythology; an opinion which the following quotation from Proclus seems to favor. In his commentary† upon the passage cited from Plato, he says, "That such, and so great an island, form-

* Pritchard's *Eastern Origin of the Celtic Nations*, p. 190. That a migration from the west to the east, at so early a period, is not improbable, cannot be better illustrated than by the following passage: "Among the strange nations with which Ulysses became acquainted in his wanderings, the Phæacians deserve a moment's attention. It appears that they were much more refined and industrious than the Greeks, that they were better informed in the arts, more skilful navigators, and were addicted to commerce. They inhabited the island of Scheria, supposed to be the same as Corcyra, having been forced to leave their former abode in Hyperia, from the troublesome neighborhood of the Cyclops. This mention of a retrograde movement from west to east, and of a people more cultivated than the Greeks, is extremely remarkable at so early an age.—*Cooley's Hist. Mar. and Inland Dis.*, vol. i. p. 17.

† Proclus, in *Timæus*, Cory's *Fragments*, p. 233.

erly existed, is recorded by some of the historians, who have treated of the concerns of the outward sea. For they say that in their times, there were seven islands, situated in that sea, which were sacred to Persephone, and three others of an immense magnitude, one of which was consecrated to Pluto, another to Ammon, and that which was situated between them to Poseidon; the size of this last was no less than a thousand stadia. *The inhabitants of this island preserved a tradition, handed down from their ancestors, concerning the existence of the Atlantic island, of a prodigious magnitude, which had really existed in those seas; and which during a long period of time governed all the islands in the Atlantic ocean. Such is the relation of Marcellus in his Ethiopian history.*"* This celebrated legend has been variously interpreted, and some of the later authors gave it an allegorical meaning. But this opinion can scarcely be supported, for Plato seems to have implicit belief in the facts he narrates, and records them as matter of history. It appears also that this philosopher conceived the extent of the earth to be much greater than was usually received at that period, and that the latter Platonists were convinced that the earth contained two quarters, in an opposite direction to Europe and Asia.† The traditions in relation to Atlas present another curious fact, which would indicate some connection in the ancient mythology between the story of Atlantis, and the former

* According to the Hindoos, the earth was divided by Prigauratta into seven Dwipas or islands; he at first intended to share his dominions among his ten sons, but three of these retired from the world. Afterwards all the Dwipas, but one, were destroyed by a deluge.—*Cooley's Mar. Hist.*, vol. i. p. 149.

† Taylor's Plato, vol. ii. p. 434.

existence of greater skill in the art of navigation ; for it seems to be justly concluded, that Atlas was a personification of navigation, or as described by Homer, "one who knows all the depths of the sea."*

In any event, after a fair and impartial examination of all these circumstances, it seems extremely difficult to regard the account of Plato as a fabrication. Its accordance with the ancient mythology, and with facts now well ascertained, and its allusion to a western "continent," unknown at that period, oppose such a presumption. If it was the creation of Grecian or Egyptian imagination, surely fancy never formed a truer fiction, nor modern discovery disclosed a more striking coincidence. But, yielding all the credit to these traditions to which they may be entitled, it is yet a question whether they referred to islands still existent in the Atlantic ocean, as the Azores, and the West Indian archipelago, or to land now submerged ; as it is possible that, in a fertile mythology, and in the absence of any more accurate means of explanation, their disappearance may have been attributed to earthquakes and other natural convulsions, rather than to the more probable cause,—the loss of the means of communication arising from a decline in maritime skill. Whatever be the decision upon this point, it will be perceived that if these accounts are to be relied upon, as historical evidence, they afford no proof of a former *land connection* between Europe and America, Atlantis being invariably described, as an *island* in the ocean that rolled between the two continents.

It remains to inquire what evidence exists of a similar con-

* Anthon's Class. Dic., Atlas.

nection with Asia. It has been supposed, that a vast tract of land, now submerged beneath the waters of the Pacific ocean, once connected Asia and America, and formed a passage-way for the migration of men and animals to this continent. The arguments in favor of this opinion are predicated upon that portion of the Scriptures, relating to the "division" of the earth in the days of Peleg, which is thought to indicate a physical division,—upon the analogies between the Peruvians, Mexicans and Polynesians, which latter are conjectured to have been saved, by a flight to the summits of the mountains, now forming the islands they occupy,—and upon the difficulty of accounting in any other manner for the presence of some kinds of animals in America. That part of the Genesis referred to, states that one of the sons of Eber was named Peleg, for in his days "was the earth divided." In the sixth verse of the same chapter, however, in speaking of the descendants of Japheth, it is said, "By these were the isles of the Gentiles divided, in their lands;" and in the seventh succeeding verse, "These are the families of the sons of Noah, after their generations,—in their nations,—and by these were the nations divided in the earth, after the flood." Is it to be determined, then, that a great convulsion, overwhelming multitudes of the human race, destroying nearly one-half of the habitable globe, ten thousand miles in extent, and producing the most important revolutions in the aspect, condition and climate of the earth, was thus incidentally alluded to, under the simple expression, "the earth was divided;" or rather, was not reference made to a political or social division, as described in preceding and subsequent verses, between the families of the sons of Noah, their generations and nations?

That remarkable analogies are to be observed between the

Mexicans, Peruvians, and Polynesians, is unquestionable; but this, in itself, argues nothing in favor of a land connection. Besides, if these resemblances are referrible to such a communication, why is it that similar coincidences do not exist in zoology, and that none of the larger animals, either of Asia or America, have been discovered in these islands, save such domesticated ones, as may easily have been carried in the rudest kind of vessels? and why is it, in particular, that the domestic animals, which are distributed over most of these islands, were not found in the new world? The reply is manifest: because this conjectured terrestrial communication never existed, a conclusion substantiated, in some measure, by geological testimony. Instead of being those portions of the deluged territory, which from their height have escaped submersion, there are no islands, yet examined, in Eastern Oceanica, but such as consist either of volcanic rocks, or coralline limestone, bearing marks of having been upheaved from the bosom of the ocean, by successive volcanic eruptions,—or as have been formed upon the crests of sub-marine volcanoes, that have even the rims and bottoms of their craters overgrown with coral. This is the case even with the largest islands, where coral reefs are sometimes found on the volcanic soil, reaching from the sea-shore far into the interior. And upon the summit of nearly the highest mountain in Tahiti or Otaheite, an island composed almost entirely of volcanic rocks, at an elevation of twelve thousand feet above the level of the sea, there is a distinct stratum of fossil coral, showing that a great part, if not the whole of the island has been raised from the level of the ocean, and has not been formed by supra-marine eruptions. Instead of evincing any evidences, indeed, of the submersion of a large

tract of land, joining America and Asia, the proofs are directly dissentient, and geological examination shows, that the Pacific has been a vast theatre of igneous action, and that its immense archipelagos, instead of being surrounded, before the time of their insular formation, by land, are all composed of coral limestones or volcanic rocks upraised from the sea.*

But notwithstanding these facts in the physical geography of the Oceanic islands, it is still insisted, that this theory affords the only method of accounting for the migration of animals to this continent. This position admits of several answers. 1st. If the hypothesis be conceded as well founded, there are difficulties to encounter in the remarkable difference which exists, between the zoology of Asia and America. Had so easy a communication ever existed, it is obvious that the animal kingdom of this continent should correspond in a great degree with that of the other, whereas on the contrary, there is the widest discrepancy between them. Besides wanting some of the domestic and other animals of the Pacific islands, we have not the horse, the cow, the camel, the dromedary, elephant, lion, rhinoceros, camelopard, hippopotamus, the tiger, and other mammalia of the eastern hemisphere, while at the same time the American sloth, paca, coati, agouti, cougar, peccari, and lama are all unknown in Asia. 2d. It is far from being conceded, that any necessity exists, for explaining the presence of animals in America in the way proposed; for while there is plausibility in the opinion, advanced by many distinguished naturalists, that there have been distinct animal creations, simultaneously, for

* Lyell's Geology, vol. ii. p. 174, etc. Tour through Hawaii, by Rev. W. Ellis, pp. 7, 9, etc.

different portions of the earth—an idea in nowise opposed by the Scriptural accounts contained in the Genesis; and while many learned and pious men have maintained that the Deluge was partial, and of no greater extent than was necessary to accomplish its great end, the destruction of the human race; there are decided indications of the former existence of a warmer climate in the northern regions of both continents, by which the main objection to the migration of our tropical animals by a northern route is removed. By natural, or as they are sometimes unjustly termed, accidental causes; by the instinct of some animals to migrate; by floods, whereby those capable of swimming have been carried vast distances; by sudden scarcity of food, inroads of more powerful genera, or changes in local climate;—by the drifting of ice-floes, and of those floating islands, which covered with trees and animals have been met at sea; and by the direct interposition of man,—the distribution of the brute creation over regions far more widely separated than the opposite shores of Behring's straits, or of the Aleutian islands is easily demonstrated; and at the same time, such partial and occasional causes may explain the absence of many of the species of the old continent. The great difficulty, however, impeding such a solution of this problem is the present inclement climate of this portion of the earth, too severe, doubtless, for the existence of those tropical animals, which must have passed by this route.

Without intending by additional theories, to perplex a subject, already sufficiently, and perhaps unnecessarily embarrassed, by this zoological question, it may be well to allude to the evidences of the former existence of a higher temperature in the temperate and Arctic regions than they now enjoy. Thus in Si-

cily, Calabria, France and England, fossil plants, reptiles, and the remains of quadrupeds have been discovered, some of which from their form and structure it is apparent must have existed in a much warmer climate, than those countries possess at present; others are species of genera analogous to those now flourishing in warmer districts, and others are exactly and specifically identical with those which now are found only in tropical climates. In the superficial deposits of Europe, are found the remains of the elephant, rhinoceros, tiger, lion, hippopotamus, and hyena, animals now all occupying warmer regions. In northern Siberia, America, and even upon the very shores of Behring's straits, the bones of the rhinoceros and mammoth have been discovered,* while the remains of plants, corals, and

* The bones of the mammoth are, as it is well known, widely spread over the American continent, and in some places in great profusion. Cuvier says that its remains are in a better state of preservation than any other fossil bones; and there are some curious facts which may give rise to the conjecture, that its extinction is more recent than has been supposed. Charlevoix, in speaking of the Orignal (elk), narrates an Indian tradition of "a great Orignal," an enormous animal, whose skin was proof against all kinds of arms, and that he had "*a kind of arm which grew out of his shoulder.*"—*Voyage*, vol. i. p. 88. Dr. James, in describing the various forms under which the Wahconda is supposed to appear to the medicine-men of the Missouri tribes, observes that "one individual attributed to an animal from which he received his medicines, the form and features of *the elephant.*"—Vol. i. p. 246. Some bodies of the mammoth found in the United States, have been well preserved, and in one case, where parts of the flesh and stomach were still existing, within the latter the remains of plants now known in Virginia were observed.—*Bakewell's Geology*, p. 335. It is Clavigero, I believe, who says

madrepores, upon Melville island, seventy-five degrees north latitude, are of such, as could have subsisted only in the heat of the tropics. Innumerable facts of this character have induced geologists to conclude, that the northern hemisphere, at some distant period possessed a much warmer climate, congenial with the physical constitution of this its extinct animal and vegetable kingdom, and which diminished gradually, even after the appearance upon the earth of a great portion of the existing species. But to return to the theory under discussion, there is

that a tomb in the city of Mexico, upon being opened, was found to contain the bones of an entire mammoth, the sepulchre appearing to have been formed expressly for their reception. Mr. Latrobe relates, that during the prosecution of some excavations near the city of Tezucuo, one of the ancient roads or causeways was discovered, and on one side, only three feet below the surface, in what may have been the ditch of the road, there lay the entire skeleton of a mastodon. It bore every appearance of having been coeval with the period when the road was used, and he suggests that these animals may have been the beasts of burden of the ancient inhabitants.—*Latrobe's Ramb. in Mex.*, vol. i. p. 145. The tusks of the mammoth, or of an animal whose bones are often found accompanying it, in this country, bear a near resemblance to the tusk of the elephant.—*Trans. Am. Phil. Soc.*, vol. iv. pp. 512, 513. It has been thought that the head and trunk of the elephant have been represented upon the Mexican monuments, and in some of their paintings,—particularly in the Codex Mexicanus at Vienna. Waldeck says that they are to be seen at Palenque and Uxmal, and remarks that in the figures at Uxmal, the trunk is longer than that of the tapir, and is turned upwards in the air, facts which he considers as showing decisively that the head of the tapir was not intended, for that animal cannot elevate its trunk.—*Voyage Pittoresque*, etc., pp. 74, 100.

one circumstance, which, as respects the civilized nations of Mexico and Central America, seems to be decisive of the question. In the maps of the migrations of these nations, the first journey is generally represented, as having been made over some body of *water* ; and indeed there does not appear to be a single well authenticated tradition among any aboriginal tribes, civilized or barbarous, of a passage by land, while many have preserved clear accounts of a *prior* event, the great deluge, which, in Mexico and Peru at least, is manifestly the same as recorded by Moses.

CHAPTER V.

ANCIENT NAVIGATION AND THE DRIFTING OF VESSELS.

THE proofs which exist, showing that our continent was peopled at a very early age, suggest an inquiry as to the maritime skill of the ancients. The high position attained by many of the primitive nations in various of the arts and sciences, and the extent to which commerce was prosecuted in very remote ages, render it improbable that the conquest of the ocean was never accomplished,—much less, that it was never attempted. Knowledge is not partial nor contracted in its influence; its impulses are sympathetic, and seek development in whatever direction the curiosity, the interests, or the enterprise of man affords an object. It would have been an anomaly, indeed, for the sciences of geometry and astronomy to have existed in so great perfection, without being applied to navigation. Besides, there are passages in the works of authors, sacred and profane, which it is contended by the learned, alluded to the magnet. Thus Plato speaks of the attractive powers of the Heraclian stone; Sanchoniatho says that Omanus contrived Bœtulan stones that moved as having life; and Homer, in lauding the maritime skill of the Pheacians, remarks of their vessels, that they sped to distant climes, through pathless seas, without the aid of pilots, and though “wrapt in clouds and darkness.” The Rev. Mr. Maurice observes, that the magnet is referred to by the most ancient classical writers, under the name of *Lapis He-*

racilius, in allusion to its asserted inventor, Hercules, and that "the Chaldeans and Arabians have immemorially made use of it, to guide them over the vast deserts, that overspread their respective countries."* M. Klaproth has traced the communication of the use of the magnetic needle in Europe, to the Arabs in the time of the crusades, and from the Arabs to the Chinese. The latter nation appears to have been acquainted with the attractive power of the loadstone at a remote date; and its property of communicating polarity to iron is noticed in a Chinese work finished A. D. 121, and in another work it is stated that ships were steered to the south by the magnet so early as A. D. 429.† It is hardly possible that so valuable an invention should not have been communicated to the nations with which they had commercial intercourse; and it is singular that in the very quarter from which America, most probably, was peopled, —Eastern Asia,—this instrument should have been known and used, in ancient ages.

Independent, however, of these evidences respecting the knowledge of the compass, there are sufficient historical testimonies, to establish, that the ancients were not wholly ignorant of the art of navigation. That great inland sea, the Mediterranean, was traversed at an early period by the people living upon its borders, who not only achieved much in naval architecture, but performed long and arduous voyages. It has been clearly shown, that long before our era, the Canaries, Azores, the British islands, and probably the Baltic, were visited by the Carthaginians, and that Africa was circumnavigated by the

* Maurice's Ind. Antiq., vol. vi. p. 191. Hyde de Rel. Vet. Pers., p. 189, cited in *ibid*.

† The Chinese, etc., by John F. Davis, vol. ii. p. 218.

Phenicians.* The Carthagenians, before the age of Herodotus, traded with nations beyond the straits of Gibraltar, and the Phenicians in the days of Solomon made triennial voyages to Tarshish.†

The Phenecians were also engaged in conducting the commerce of Egypt, though there are good reasons for supposing, that the Egyptians were no unskilful mariners. In the time of Moses, East Indian productions were imported into Egypt,‡ and articles indicating a commerce with India, have been discovered in Egyptian tombs of the Eighteenth dynasty.§ Mr. Wilkinson says, that it is highly probable that the port of Philoteris, on the Red Sea, was already founded in the days of Joseph, and that the canal joining the Red Sea and the Nile, was probably built B. C. 1355; and hence it is not surprising that the aromatic productions of the Moluccas should have been known at Rome and mentioned by Plautus 200 B. C.|| In this commerce, the Arabians, who were “the first navigators of their own seas and the first carriers of Oriental produce,” were also engaged, before the Christian era. They sailed to the eastern seas in large vessels, and vessels of great size frequented their ports also from Indus, Patalis, Persis, and Caramania.¶ Nor were these expeditions always undertaken by following

* Cooley, vol. ii. p. 46.

† 1 Kings 10: 22.

‡ Exodus 3: 23.

§ Wilkinson, vol. i. p. 231. Ibid. vol. i. pp. 46, 69, 226.

|| Cooley, vol. i. p. 130.

¶ Crichton's *Hist. Arabia*, p. 137. Heeren's *Res.*, vol. iii. p. 408. Agatharchides in Photius, cited in Cooley, vol. i. p. 128. Also Cooley, vol. i. p. 125.

the shore. Vessels often sailed out from sight of land, trusting to the stars for guidance.

Along the southern and eastern shores of Asia, a region more nearly related to our present inquiry, there are similar indications of early maritime skill. It now appears that the laws of the Hindoos tacitly allowed commerce by sea.* Arrian mentions five different kinds of vessels among the Hindoos, one of which consisted of ships of great size.† “The Hindoos of Malacca,” says Mr. Crawford, “are the only ultra-marine colonists of that people of whom I have heard. The popular notion of its being forbidden to Hindoos to quit their country by sea is sufficiently contradicted by their existence; and how, indeed, without supposing such emigration, are we, in common sense, to account for the once wide spread of their religion among the distant islands of the Indian ocean?”‡ The Indian commerce, however, was principally in the hands of the Arabians and Malays. The Malays are still noted in the east for their enterprise, and fondness for nautical adventure, and if the opinion be correct that their language contains a decided infusion of Sanscrit, Arabic, and Coptic words, no surer testimony can be given of their ancient attainments in navigation. We are surprised to find, when the Portuguese first penetrated into the Indian archipelago, mention of Malay fleets, which in point of numbers and the size of the vessels, indicate great maritime Powers. One of these, according to Mr. Marsden, numbered ninety vessels, twenty-five of them large galleys; another, three hundred sail,

* Heeren's *Researches*, vol. iii. pp. 381, 401.

† Cited in Cooley, vol. i. p. 129.

‡ Crawford, vol. i. p. 59.

eighty of which were junks of four hundred tons burden; and another of five hundred sail, with sixty thousand men.*

If the Japanese maps are to be credited, their voyages formerly extended to Java, and on the north, it is said, to Behring's straits, and to the American coast, which they called Foosang. From the Chinese charts, Kamtschatka appears to have been known to that nation, in the seventh century, and they even claim to have carried on a trade with the north-west coast of America, and with California.† Their voyages to the south were long, and were directed by charts; they received spices from the Moluccas at an early age, and at one period probably extended their commercial enterprises, so far as the Persian gulf. In any event it seems certain that the Chinese coins were circulated in Java, and among all the nations of the Indian islands, before they adopted the Mohammedan religion, or had any intercourse with Europeans.‡

But it may be contended, and with much plausibility, that there exists no necessity of recurring to the theories respecting a former land connection, or to the proof of the maritime enterprise of the ancients,—for colonies may easily have reached our shores by the accidental drifting of canoes, and other vessels. This opinion is abundantly supported by many well authenticated instances, most of which have been recorded since this subject has attracted attention. Diodorus relates that a Greek merchant, trading to Arabia, was seized by the Ethiopians, and having been placed into a boat and turned out to

* Marsden's *Sumatra*, p. 424, etc.

† Malte Brun. *Barrow*, pp. 29, 30.

‡ Crawford's *Siam*, vol. i. p. 73. *Asiatic Res.*, vol. ix. p. 40.

sea, was carried by the winds to Taprobane or Ceylon. In the time of Eudoxus of Cyzicus, B. C. 146, an Indian was found in a boat on the shores of the Red Sea, who, upon learning the Greek language, stated that he had sailed from India, and had been driven to that distance by the wind. Pliny narrates that in the days of Quintus Metellus, some strange and savage people were driven upon the German coast, and sent by the Suevi to that general. The discovery of America by the Northmen was accidental; and Iceland was discovered A. D. 862, by some mariners who were bound for the Feroe islands, but were thrown out of their course by tempests. In 1684, several Esquimaux, driven out to sea in their canoes, were drifted, after a long continuance of boisterous weather, upon the Orkneys. It is related that a small vessel, destined from one of the Canary islands to Teneriffe, was forced out of her way by contrary winds to within a short distance from Caraccas, where meeting an English ship, she was directed to one of the South American ports.

In 1731 another barque, sailing from Teneriffe to one of the neighboring isles, drifted from her course, and was finally brought to at Trinidad. Cabral, the commander of a Portuguese fleet, sent out in the year 1500 to the East Indies, whilst prosecuting the voyage, departed so far from the African coast, as to encounter the western continent; and thus the discovery of Brazil was entirely accidental. In 1745, some vessels navigated by the natives were forced out to sea from Kamtschatka, to one of the Aleutian islands,—a distance of several hundred miles. In 1789, Captain Bligh, his crew having mutinied and seized his ship whilst in the Pacific ocean, was placed with eighteen men in a boat, provided only with a small quantity of provi-

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sions, and having traversed four thousand miles in forty-six days, succeeded finally, in landing at Tima in the East Indies.

In 1797, twelve negroes, escaping from an African slave ship upon that coast, took to a boat, and after five weeks, three of the number who had survived, were drifted ashore at Barbadoes. In 1799, three men were driven out to sea by stress of weather from St. Helena, in a small boat, and two of them reached the coast of South America in a month,—one having perished on the voyage. In 1820, one hundred and fifty inhabitants of Anaa or Chain Island, situated three hundred miles east of Otaheite, having embarked in three canoes, encountered the monsoon. Two of the vessels were lost, but the occupants of the third, after being driven from island to island, and obtaining a scanty subsistence, were found six hundred miles from their point of departure. Three natives of Otaheite, have been met on the island of Wateo, whither they had drifted in a canoe, over five hundred miles.

In 1782, Captain Inglefield of the *Centaur*, and eleven men, sailed upon the Atlantic ocean three hundred leagues, in an open pinnace, without compass, chart, or sail, and were ultimately landed on Fayal. A native of Ulea has been found on one of the Coral isles of Radack, where he had arrived with two companions, after a long and boisterous voyage of eight months, during which period they had been driven by wind and storms to the amazing distance of fifteen hundred miles. In 1686, several natives of the Caroline islands were carried by the winds and currents to the Philippine islands, by which means that group first became known to the Europeans. The Japanese are often accidentally thrown upon the Philippine islands.*

* Page's Travels, p. 46.

In the year 1542, three Portuguese sailed from Siam in a junk, and were driven out of their course to within sight of Japan.* In 1833, a Japanese junk was cast away on the *American coast* at Cape Flattery, and of seventeen men only three were saved. In the same year eleven of the same nation were drifted to one of the Sandwich islands.†

In 1721, thirty men, women and children were driven by bad weather from Farroiless to Guaham, one of the Marian isles, a space of two hundred miles; and in 1696, a like number were carried from Ancorso to Tamar, one of the Philippines, about eight hundred miles. In 1821, a large canoe filled with natives arrived at the island of Maurua, from Rurutu,—five hundred miles, in a direct course.‡ Subsequently another from Otaheite reached one of the islands near Mangea, six hundred miles; two reached Otaheite from Hao, of the existence of which place the Otaheitans were before ignorant; and the native missionaries travelling among the different Pacific insular groups, are continually meeting their countrymen,—who have been driven out to sea.

Multitudes of these occurrences must have preceded the progress of modern discovery in the Atlantic and Pacific oceans, and consequently have happened without leaving any record or trace. Accumulated cases of this kind, should be taken in connection with the fact, that excepting Spitzbergen and Nova Zembla, to the north, Falkland, and Kergueland's land to the south, whose inhospitable climes forbid permanent habitation and subsistence, no considerable extent of land has been found

* Hakluyt, vol. iv. p. 48.

† Parker's Exploring Tour, p. 152.

• ‡ Tour through Hawaii, p. 442.

uninhabited, and that with the exception of St. Helena, the smallest islands capable of supporting a population, including nearly all the numerous islets of the Pacific, however distant from continents, have been discovered tenanted by human beings.* Our race occupies islands and continents detached from the fountain-head of all human life, and pervades nearly every inhabitable spot upon the globe. Thus widely has the earth been peopled in the early periods of society—either by maritime nations, or by barbarians destitute of those arts of civilization, and that perfection in science, which enable men to intrust their lives and property without danger to the ocean, and to pursue the path of discovery in confident security.

It is impossible to attribute this extensive distribution—this tide of population flowing from island to island, and from continent to continent,—entirely to the maritime abilities of former ages, and equally impossible in many cases to suppose a former land connection, as a means of solving the difficulty. Experience affords the only clue to this problem, and shows that by those adventitious causes, which have been always in action since the beginning, man has found his way wherever his Maker had prepared him an abode; and that, in the language of a distinguished scientific author, “were the whole of mankind destroyed, with the exception of one family, inhabiting an islet of the Pacific; their descendants, though never more enlightened than the South Sea Islanders, or the Esquimaux, would in the course of ages be diffused over the whole earth.”†

* Lyell's *Geology*.

† In speaking of the fact, that the appearance of certain birds at sea indicates approach to land, Captain Fitzroy remarks: “Until I became aware of these facts, the discovery of the almost innumerable

CHAPTER VI.

THE ORIGIN OF THE ABORIGINES. PHYSICAL APPEARANCE.

THE discovery of America disclosed a new and fascinating field for the speculations of philosophers. Attracted by the freshness and novelty of the subjects thus afforded for disquisition, a bright and dazzling array of learning and talent was early directed to the important problems connected with its natural and social history, and especially to the solution of that interesting question—the origin of its native inhabitants. At that period, however, many prerequisites were wanting to the successful determination of this inquiry, which have been supplied only by the science, the enterprise and the researches which have distinguished the recent history of philosophy and knowledge. Many of the first theories, therefore, were remarkable only for boldness and improbability; for, the more feeble the light—the more dark and uncertain the truth—the more does

islands in the great ocean of Magalhaens (erroneously, though now probably for ever, called the Pacific) caused great perplexity in my mind. That Easter Island, for instance, such a speck in the expanse and so far from other land, should have been not only discovered, but repeatedly visited and successively peopled by different parties of the human family, seemed extraordinary; but now, connecting the numerous accounts related by voyagers, of canoes driven hundreds of miles away from their desired place, with these facts respecting birds, much of the mystery seems unravelled.—*Voyages*, vol. ii. p. 558.

human ingenuity struggle to fathom the mystery; and once launched on the broad sea of conjecture, the imagination too often triumphs over the reason. Another fatal defect which lay at the very root of other hypotheses, was the predisposition of their authors for some particular opinion, for whose support their perception was quick and keen in the detection of every circumstance that might be turned in its favor. Surely there are few propositions which may not be plausibly supported, by an ingenious and skilful combination of facts, carefully and adroitly selected with direct reference to a desired conclusion. "Facts," says Coleridge, "are not stubborn, but pliant things,—they are not truths, they are not conclusions, they are not even premises,—the truth depends on, and is only arrived at by, a legitimate deduction from all the facts which are really material." A bare recital of the nations which have been supposed, by various authors, to have peopled America, will abundantly indicate upon what insufficient data the solution of so great a problem has been ventured; they are the Atlantides, the Phenicians, and the Carthagenians, the Hebrews, Egyptians, Hindoos, Chinese, Tartars, Malays, Polynesians, the Northmen, and the Welsh; whilst some have gone a step further and considered America as the most ancient of the continents, and the Indians as the real aborigines of the soil.

If the Carthagenians are to be believed, they knew of no continent stretching beyond the great western ocean.* As respects the Egyptians, Hindoos, Chinese, Malays, Polynesians, and Tartars, the evidences deserve more minute consideration. The discovery of America by the Northmen, which has been so

* Festus Avienus, v. 380.

triumphantly vindicated and proved, besides being too recent to account for our aboriginal population, establishes, by its own narratives, the prior existence of a native race. The authenticity of the account of the Welsh voyages, at the close of the twelfth century, seems also to be confirmed; but the attempt to trace some remnants of that nation, with which the moderate and intelligent advocates of the theory have long been contented, has proved unsuccessful. It appears now to be well settled, that so far as the Indian dialects are concerned, there exists no evidence of the descent of any of the tribes from those colonists.* The Hebrew theory has been more strenuously maintained, and the arguments in its favor have been displayed with great ability and learning. It may be observed, that most of the points of resemblance which have been discovered between the rites and institutions of that people and the Indians, may be traced also in those of several other nations, and are indicative only of an ancient and primitive origin. But the objections have been overlooked; the Jews, though scattered through every region and climate, ever remain a peculiar people, needing no argument to prove their lineage. In consideration of their national character, it is absolutely impossible to suppose that a race adhering so tenaciously to their ancient institutions and customs, after wandering into the new world should have lost every memorial of their history, laws, and religion. Moreover, the physical types of the two races are essentially different, and we know of no effect of climate, by which the Hebrew could have been transformed into the red and beardless American. If any thing were wanting, however,

* Arch. Am., vol. ii. p. 125.

to set this notion at rest, it is probably afforded in the discovery, recently announced to the world, of the remains of those lost tribes, who were supposed to have reached our continent, still existing in Asia.

From the examination of all these hypotheses, experience teaches the future inquirer one lesson—not to institute a narrow and restricted comparison with some particular nation, but to extend it to all of the primitive and ancient people of the old world. It should be remembered, also, that all reasoning upon such questions is moral and not demonstrative, and that we can only decide between different theories, according to their *degrees* of probability. And in determining the order of investigation, those resemblances which may have originated from the same natural causes, and which usually characterize a particular stage of society, deserve the slightest consideration, as evidences of the lowest rank, while those which cannot be traced to such sources, which are manifestly of exotic origin, or seem to be arbitrary, are entitled to the greatest weight. Proceeding upon this basis, it appears just, to trace the relationship of nations by analogies in physical appearance, language, arts, sciences, religion, customs, civil institutions, and traditions.

Physical appearance. In the discussion as to the causes of that physical diversity which exists between various portions of the human race, physiologists have raised three prominent questions. 1st. Are all mankind descendants of the same human family? 2d. Have the varieties, which are observable, been occasioned by the operation of external circumstances upon a conformation and appearance originally the same; or by a tendency to produce offspring with physical characters different

from those of the parents? 3d. What is the number of races originally distinct from each other? A brief review of the arguments upon these topics, is essential to the consideration of the most important link in the chain of evidence, connecting the aborigines with certain nations of the eastern continent.

The first proposition, by the voice of history and the concurrent testimony of the most intelligent naturalists, has been determined in the affirmative. As to the first branch of the second proposition, few questions have been discussed with more research and ability. The force of the arguments, advanced by those who advocate this opinion, may be tested by reference to the proofs which have been adduced, to show that the color of the skin is altered by the influence of the solar rays. This, it is held, is observable in the darkening of the skin of the face, and of those portions of the body which are most usually exposed. Analogical testimony is offered, in the blanching of vegetables when the rays of the sun are excluded, the prevalence of light colors among polar animals, and in the change of the color of some animals, during the winter season. It is extremely questionable, however, whether these facts in comparative physiology are entitled to much weight, in the solution of this problem. For the variations in the color and texture of the coverings of the goat, the hare, and the reindeer, attending the change of the seasons, appear to be connected with the process of molting, and to depend upon a specific constitutional peculiarity; while the human hair is permanent, yielding only to age and disease. This method of accounting for the existence of the varieties in the human race, though supported by the authority of such distinguished philosophers as Blumenbach, Buffon, Zimmerman, and others, has however

been ably and successfully combated, it is thought, by Dr. Lawrence and Dr. Pritchard, who have proved that the effects of climate and other external circumstances are not transmitted by generation. The former remarks, that "certain external circumstances, as food, climate, mode of life, have the power of modifying the animal organization, so as to make it deviate from that of the parent. But this effect terminates in the individual. Thus, a fair Englishman, if exposed to the sun, becomes dark and swarthy in Bengal; but his offspring, if from an Englishwoman, are born just as fair as he himself was originally; and the children, after any number of generations that we have yet observed, are still born equally fair, provided there has been no intermixture of dark blood."* Dr. Pritchard observes, in his observations upon this subject, that "nothing seems to hold true more generally, than that all *acquired* conditions of body, whether produced by art or accident, end with the life of the individual in whom they are produced." It will be perceived, that the solution of this question rests mainly upon two facts: 1st, whether, in the distribution of the races there is any relation to climate; and, 2d, whether there are any historical proofs of an alteration of complexion produced by a change of location. One of the learned authors above cited has perhaps succeeded in rendering it highly probable, that the physical characters of the African nations display themselves under a relation to climate.† But the force of this argument is broken, upon examining into the climatic situation of the races in the other continents. In Europe, where a gradual in-

* Lawrence's Lectures on Man, p. 62.

† Physical Res., vol. ii. p. 331. See Lawrence, p. 344, where this is controverted.

crease in the darkness of the complexion is endeavored to be traced as we proceed southwardly, we still find the original distinctive characteristics of different races, retaining a permanence in various regions, whither they have migrated, notwithstanding the change in locality, and the lapse of time. The Laplanders, though far to the north, are darker than the Germans, and betray a Mongolian origin in their swarthy color. The nations of German origin, in Great Britain, are still contrasted with those of Celtic descent; and the Normans of France preserve marks of their foreign origin, in their aspect and features. In Asia we find copper-colored nations in the northern parts of Siberia, where they have existed beyond historical memory. In India, while some of the inhabitants have a light transparent brown complexion, other tribes, occupying mountainous countries, are characterized by a dark hue approaching to black.* Under the full fervor of a tropical sun, a fair complexion may be perceived among the Sumatrans,† “an irrefragable proof,” says Mr. Marsden, “that the difference of color, in the different inhabitants of the earth, is not the immediate effect of climate.”‡ In the islands of the Indian and

* Heber's Narrative, vol. ii. pp. 466, 179, 188. Asiatic Researches, vol. vii. p. 153.

† Mr. Marsden, in his History of Sumatra, remarks, “The children of Europeans, born in this island, are as fair as those born in the country of their parents. I have observed the same of the second generation, when a mixture with the people of the country has been avoided. On the other hand, the offspring and all the descendants of the Guinea and other African slaves imported there, continue, in the last instance, as perfectly black as in the original stock.”—*Marsden*, p. 46.

‡ Marsden, p. 46.

Pacific oceans, not only is the same fact observable, but there are appearances of a race approaching the Negro, and wholly distinct from the tribes of lighter hue, and occupying extreme regions under the forty-fifth degree of south latitude. The black races who have been considered the aborigines, have occupied the middle and mountainous parts of many islands, leaving the coasts and plains to the fairer race. In America, where more than in any other portion of the globe, a satisfactory solution of this question might be anticipated, in consequence of the isolated situation of the continent, and the consequent escape from intermarriage with the other races, the facts are still more decisive. All the Americans are generally distinguished by the same prominent physical peculiarities. In a country stretching from the Arctic regions to the fifty-fifth degree of south latitude, this uniformity is exceedingly remarkable. The differences of complexion that do exist, are opposed to the opinion that the scale of complexion is graduated, according to the distance from the equatorial regions. Thus in the neighborhood of the Esquimaux there are tribes of a deep copper* color, while the fairest hues of the skin are found in the tropical countries of South America;† and at the remotest extremity of the continent, the copper complexion again characterizes the Fuegians.‡ “The Indians of New Spain,” says Humboldt, “have a more swarthy complexion than the inhabitants of the warmest climates of South America.” * * “We found the people of the Rio Negro, swarthier than those of the lower Orinoco, and yet the banks of the first of these rivers enjoy a much

* Hearne. Hum. Pol. Essay, vol. i. p. 109.

† Hum. Pers. Nar., vol. v. p. 565, etc. ‡ King and Fitzroy.

cooler climate, than the more northern regions." * * "We everywhere perceive that the color of the American depends very little on the local position, in which we see him."*

It remains to inquire whether there are any historical proofs of the transmutation of the physical appearance of one race into that of another, by a change of location. A difficulty immediately arises, as to the nature of the proof usually adduced on this point. It is manifest that no accurate and reliable conclusion can be drawn, unless it is clearly shown that the change has not been produced by intermarriage,—a negative almost impossible to prove, unless supported by immediate and continued observation. Thus, historical testimony of the migration of any people, should be accompanied with clear evidence, that they have not intermingled with the native race. On the other hand, ethnographical proof alone is almost equally inconclusive. Similarity of language is not sufficient to indicate the common origin of nations, for by conquest and other causes, native languages have sometimes been adopted by the conquerors, and at others been eradicated and supplanted. In accordance with these views, it is apparent that the instance of the black Jews, stated by Oldendorp to exist in Congo, is of little force, for it is impossible to show that their original physical character has been altered by climate, and not by intermarriage with the aboriginal tribes. The latter appears clearly to have been the case with some of the Jews discovered by Dr. Buchanan, on the coast of Malabar, and who had occupied that country for more than fifteen hundred years. Those of pure blood are called white Jews, while those who have intermarried with the Hindoos, are termed black Jews. The same remark applies to

* Pol. Essay, vol. i. p. 109.

the descendants of those Arab tribes in Egypt and Nubia, some of which migrated to that country eleven or twelve centuries since.* The change of color among various portions of them is undoubted, but that it has been occasioned by climate, is far from being established, particularly as the occasional instances of black individuals among tribes of an olive complexion indicate that very intermixture, which it has been endeavored to disprove. Indeed it is conceded by Dr. Pritchard, "that there are no authenticated instances, either in Africa or elsewhere, of the transmutation of other varieties of mankind into Negroes;" and the arguments he has advanced, that the Barabba of Nubia, a copper-colored race, are the descendants of the Negro mountaineers of Kordofan, are met by historical proofs of great weight, especially when they are opposed mainly by lingual analogies. On the other hand, it needs no critical examination to perceive, that however they may have originated, the physical peculiarities of different races have been retained with the greatest tenacity, under every variety of climate and position. The Mongols in India, the Moors in Africa, the Laplanders, the Celts, and Germans in Europe, the African slaves in America, and the contiguous tribes of Papuas and Malays, in the islands of the Pacific, where they have not intermarried, may still, after the lapse of a long period of time be distinctly traced, while the Jews, exposed to the influences of every clime, remain an incontrovertible argument against the inefficacy of climate.

Perceiving the difficulty of deducing the origin of the races from climatic causes, naturalists have recently maintained that this diversity has arisen from a liability, existing in the human

* Pritchard, vol. ii. pp. 342, 260.

constitution, to wander from its primitive form in the production of varieties, which are continued by generation. The arguments in favor of this hypothesis are founded upon the occasional production of Albinoes, xanthous, and other varieties, by all the races,—in the existence of families possessing certain physical peculiarities, such as the Sedigiti, or six-fingered individuals mentioned by Pliny and by modern physiologists, and the Porcupine men described in the Philosophical Transactions, which monstrosities have been transmitted to their offspring; and upon analogical testimony, derived from the animal kingdom, of similar diversities originating sporadically and continued by generation. And it must be admitted that this theory is sufficiently supported, by an irrefragable mass of testimony, to establish *the original unity* of the human race, and to indicate that the varieties of mankind are descended from the same primitive stock. Historically, however, we have no knowledge that the races have thus originated,—and, in searching for the period when men were of one form and appearance, we are carried back to the ages immediately succeeding the deluge, and preceding the dispersion of nations. “The peculiarities which arose in the human species at a remote and unknown period, have become the characteristic marks of large nations; whereas those which have made their appearance in later times have, in general, extended very little beyond the individuals in whom they first showed themselves, and certainly have never attained to any thing like a prevalence throughout whole communities. But this is a circumstance which it does not seem difficult to explain; if we consider that ever since the population of the world has been of large amount, the possessors of any peculiar organization have borne such a

very small numerical proportion to the nation to which they belonged, that it is no way surprising that they should soon have been lost in the general mass; still less that they should have failed to impress it, with their own peculiar characters. In the early period of the world, when mankind, few in numbers, were beginning to disperse themselves in detached bodies over the face of the earth, the case was altogether different; and we can easily understand how, if any varieties of color, form, or structure then originated in the human race, they would naturally, as society multiplied, become the characteristics of a whole nation.”*

That the physical characteristics of several of the races, as they now exist, are of great antiquity, and entitle them to be considered as primitive, will be shown hereafter, and we now proceed, therefore, to inquire, what is the number of primitive races separated and distinguished by physical differences. In this inquiry, as to the number of varieties that should be recognized in the human species, and the characters which mark them, a great diversity has existed among naturalists, arising from the various methods by which they have proceeded to its determination, and from too great an oversight of the probable effects, attending the intermixture of migrating tribes. Dr. Pritchard, after extensive research, and with an application of great and varied erudition, has decided upon a division of the human family into seven principal classes, separated by strongly marked lines. I. The Iranian (or Caucasian) race. II. The Turanian (or Mongolian). III. The Native American, excluding the Esquimaux and some other tribes. IV. The Hot-

* Lib. U. Knowledge.

tentot and Bushman race. V. The Ethiopian (or Negro). VI. The Papuas of Polynesia. VII. The Alfouru and Australian nations.* Blumenbach, who has been followed in his classification by Dr. Lawrence† and other distinguished naturalists, after a most thorough investigation, determined upon a distribution into five leading divisions. I. The Caucasian race. II. The Mongolian. III. The Ethiopian. IV. The American, and V. The Malay. The comprehensive mind of Cuvier seems to have inclined him to a less complex division into three varieties. I. The Caucasian. II. The Mongolian, and III. The Ethiopian; but he appears to have been undecided with respect to the specific identity of the American race with the Mongolian, and of the Papuas with the Negroes or Ethiopians.‡ This division into three varieties, moreover, is recommended by the fact, that the Caucasian, Mongolian, and Ethiopian races, or as they may be styled, the white, red, and black races, are acknowledged by most physiologists, to possess the strongest marks of difference, and that they form a component part in nearly every complete system yet proposed. In view of the influences of climate, manners and customs, food, and of all those moral and physical circumstances which are admitted, even by those who maintain the original and constitutional distinction of races, to operate *partially* upon the human conformation; and more especially in consideration of the undoubted results of intermarriage, it is doubtless unphilosophical, to con-

* Malte Brun it is said enumerates 16 different races. Linnæus divided mankind into five classes, and Buffon at first into six, but afterwards five.—*Morton's Crania Americana*, p. 34.

† Lawrence's Lectures on Man, p. 355.

‡ Règne Animal, vol. i. p. 54, Am. Edit.

cede a greater number of primitive varieties, than are sufficient under the action and agency of these causes, to account for the great diversities of mankind at present existing. Or in other words, if by the admission of three primitive races, all the known varieties may be deduced from these, by the unquestionable influence of external causes, or by intermarriage, we are not justified in asserting a greater number. The leading physical peculiarities of the three great races are as follows.

I. The Caucasian race is distinguished by a white or fair skin—hair fine, long, and often curling, and together with the eyes, of various colors—an oval face—full beard—distinct and finely proportioned features. The cranium is large—upper and anterior regions fully developed—chin full, and the teeth vertical.*

II. The Mongolian race is characterized by a red or copper-colored complexion, varying on the one hand to a sallow yellow or tawny color, and on the other to a deep mahogany hue; black eyes, long straight black hair, little or no beard, long linear or oblique eyes, high cheek bones—square and pyramidal head, with retreating forehead—broad and flattened face.

III. The Ethiopian race is marked by a black skin—black eyes—black and woolly hair, prominent cheek bones—cranium compressed laterally and elongated towards the front—forehead low and narrow—jaws projecting, lips thick, and nose thick and flat.

It is not to be asserted, however, that these characteristics are constant,—as in the white race a great variety of feature

* Morton's *Crania*, p. 5. Prit., *Phys. Res.*, vol. i. p. 262. Lawrence, p. 356. Cuvier, *Règne Animal*, vol. i. p. 52.

and physical conformation is observable, so in the others, though in an inferior degree, considerable differences may be remarked, even among the same tribes and nations. But this individual dissimilarity is not generally so wide and extensive, as to create a doubt as to what race the individual belongs.* Certain portions of the human organization are so variable, as often to destroy all lines of distinction, so far as they are concerned, between the races; others are more permanent, and of consequence afford surer indications to distinguish the varieties. The features, intimately connected as they are with the local position, the moral and intellectual cultivation and faculties of nations, are among the former class; the complexion, and the character of the hair among the latter. Having continual reference to this criterion, it will be seen that the most constant peculiarities of the three races consist: 1. In the complexion, which in the pure varieties is either white, black, or of a red hue, varying to yellow or deep mahogany. 2. In the form of the skull. 3. In the hair, which is either fine, long, and curling, and of different colors; black and woolly, or straight, black and lank. 4. In the fullness of the beard. 5. In the position of the eyes, the obliquity of which characterizes the red race.

From this preliminary review of the arguments and opinions of eminent and learned physiologists, we proceed, with much diffidence, to inquire whether, of the other varieties maintained to exist by naturalists, there are any entitled to be considered as primitive, or rather as possessing such distinctive characters as to forbid the probability of their being mixed races.

* Combe's Phrenology, p. 561, etc., on the cerebral development of nations.

IV. The Papuas. This name is most commonly applied to tribes, whose color, approaching to black, varies in the deepness of its shade, and whose hair is neither lank nor absolutely woolly.* They inhabit the northern parts of New Guinea, the islands of New Britain and New Ireland, and other groups extending southward into the Pacific Ocean. Of the genuine Papuas it is said, that "the color of the skin is black, mixed with an eighth part of yellow, which imparts to it a clear tint of various intensity. Their hair is black, very thick, and moderately woolly. They wear it frizzled out in a very remarkable manner, or let it fall upon their necks in long and twisted masses. Their countenance and features are regular, except their noses, which are somewhat flattened, with the nostrils enlarged in the transverse direction. Their chins are small and well formed; their cheek bones are prominent, their foreheads elevated, their eyebrows thick and long. Their beards are thin; they let them grow upon the upper lip and chin like many African nations."† In this description it will be perceived, that there is just that degree of diversity from the Ethiopian or Negro, which a slight mixture with the Malay islanders of the Pacific might produce. This conclusion is strengthened by the circumstance, that as we proceed towards the Malayan islands, where the races may be mixed more equally, we find the Papuan complexion becoming lighter and approaching that of the Oceanic nations. Mr. Lesson, who supposes them to have migrated into the islands of the

* Prit. Phys. Res., vol. i. p. 249.

† Memoire sur les Papouas or Papous, par MM. Lesson et Garnot. *Annales des Sie Nat.*, tom. x, 1827, p. 93, cited by Pritchard, vol. i. p. 261.

Pacific subsequently to the Oceanic tribes, traces a close resemblance between them and the dark-colored tribes of Madagascar, a fact which adds to the force of our conjecture, for in that island, as will hereafter appear, there is also a race not aboriginal, distinguished by an olive color, straight black hair and thin beard, and similar to the Malay race* in their leading characteristics; and from which, by intermarriage with the Negro, has probably originated the very variety resembling the Papuas. It is curious, that in America, we find the same consequences attending the mingling of the two races. "In this part" (of Brazil), say MM. Von Spix and Von Martius, "we met with several families of the people called Cafusos, who are a mixture of blacks and Indians. Their external appearance is one of the strangest that a European can meet with. They are slender and muscular, in particular the muscles of the breast and arms are very strong; the feet, on the contrary, in proportion weaker. Their color is a dark copper or coffee brown. Their features, on the whole, have more of the Ethiopic than of the American race. The countenance is oval, the cheek-bones high, but not so broad as in the Indians; the nose broad and flattened, but neither turned up nor much bent; the mouth broad, with thick but equal lips, which, as well as the lower jaw, project but little; the black eyes have a more open and freer look than in the Indians, yet are still a little oblique, if not standing so much inward as in them, on the other hand not turning outwards as in the Ethiopians. But what gives these Mestizoes a peculiarly striking appearance, is the excessively long hair of the head, which, especially at the end, is half curled, and rises almost perpendicularly from the fore-

* Ellis's *Hist. Madagascar*, vol. i. pp. 115, 422, and preface, p. 6.

head to the height of a foot, or a foot and a half, thus forming a prodigious and very ugly kind of peruke. This strange head of hair, which, at first sight, seems more artificial than natural, and almost puts one in mind of the *plica polonica*, is not a disease, but merely a consequence of their mixed descent, and the mean between the wool of the Negro and the long stiff hair of the American." "*This conformation of the hair gives the Cafusos a resemblance with the Papuas in New Guinea*, and we therefore thought it interesting to give the representation of a woman of that race in her peculiar costume."* To this it needs only to add, that with the Papuas of New Guinea "the hair is long and woolly, and frequently forms a huge peruke three feet in diameter."† Thus it appears, that in three of the quarters of the globe, where the Negro and Mongolian races have intermarried, the physical result is nearly the same, a circumstance appearing to justify the inference, that the Papuas are a mixed race.

V. The same course of remark applies to the Alfoursous or Endamenes, who occupy the central parts of some of the Polynesian islands, and who, so far as our descriptions of them extend, seem to possess none of those distinctive peculiarities which should class them as a separate and original human variety. For this reason, they have been omitted in several systems of classification.

VI. The Hottentots and Bushmen also have been considered as composing a distinct race. They are of a yellow or nut-brown color;‡ the cheek-bones are high and

* Travels in Brazil, vol. i. pp. 323, 324.

† Forrest's Voyage to New Guinea.

‡ Kolben's Voy., in Mavor, vol. iv. pp. 17, 18, 19. Barrow's Southern Africa, vol. i. pp. 157, 278. Trav. in China, p. 30.

prominent, and with the narrow pointed chin form nearly a triangle; the nose is generally flat, and the lips thick. The character of their hair, although not precisely woolly, approximates them to the Negro. On the other hand, their color, general physiognomy, and particularly the position of the eye, approach the physical appearance of the Mongolian race. Their eyes are "so oblique, that lines drawn through the corners would not coincide as being on the same plane:" and Mr. Barrow observes, "the color of the eyes is of a deep chestnut; they are very long and narrow, removed to a great distance from each other; and the eyelids at the extremity next to the nose, instead of forming an angle, as in Europeans, are rounded into each other exactly like those of the Chinese, *to whom, indeed, in many other points they bear a physical resemblance.*"* It has also been remarked, that besides the great likeness between the Hottentot and Mongolian features, a close analogy exists between the shape of the skull in both races. It remains to determine what peculiarities of organization identify the American, Malay and Mongolian races.

VII. The American race. In the opinion of Cuvier, the Americans have no precise or constant character, which can entitle them to be considered as a particular race, referrible to none of the Eastern continent,† and we accordingly find that distinguished philosopher hesitate in extending the number of human varieties beyond the Caucasian, Mongolian and Ethiopian. The American aborigines are generally distinguished by long, straight, black hair, great thinness of the beard, prominent cheek-bones, a copper or brown-red color, varying to lighter or darker shades, thick lips, eyes black, and often obliquely placed,

* Barrow, p. 157.

† Règne Animal, vol. i. p. 55.

and noses either flat or aquiline.* In referring to such exceptions as exist to this description, we should not forget that tribal distinctions are everywhere maintained with great tenacity, and, of consequence, that to such occasional aberrations from the common standard as have originated among any particular family, a great opportunity for perpetuation has been afforded.† The uniformity of the American physical appearance has, however, struck most travellers and naturalists with great force. The testimony of a few may be cited, though authorities might easily be accumulated.

“The Indians of New Spain,” says Humboldt, “bear a general resemblance to those who inhabit Canada, Florida, Peru and Brazil. They have the same swarthy and copper color, flat and smooth hair, small beard, squat body, long eye, with the corner directed upwards towards the temples, prominent cheek-bones, thick lips, and an expression of gentleness in the mouth strongly contrasted with a gloomy and severe

* Charlevoix says the Indian color is not “a third species, as some people have imagined, between the white and black. They are very swarthy and of a dirty dark red, which appears more in Florida and Louisiana.” He speaks also of the scantiness of their beards.—*Voyage*, vol. ii. p. 69.

Dr. Morton maintains that their color is not red, but should rather be described as brown.

“Their eyes,” says Hennepin, speaking of the northern Indians, “are altogether black; besides they differ very much in their eyelids from those of Europe. Hence it comes to pass that their sight is stronger and more piercing than ours.”—Vol. ii. p. 70.

† Hum. Pers. Nar., vol. v. p. 565.

look." "Over a million and a half of square leagues, from the Terra del Fuego islands, to the river St. Lawrence and Behring's straits, we are struck at the first glance with the general resemblance in the features of the inhabitants."* "The Indians," says Ulloa, "are of a copper color, which by the action of the sun and air grows darker. I must remark that neither heat nor cold produces any sensible change of color, so that the Indians of the Cordilleras of Peru are easily confounded with those of the hottest plains; and those who live under the line, cannot be distinguished by the color from those who inhabit the fortieth degrees of north and south latitude." "I had no sooner beheld these Americans," observes the enterprising Ledyard of the natives of Nootka, "than I set them down for the same kind of people, that inhabit the opposite side of the continent. They are rather above the middle stature, copper-colored, and of an athletic make; they have long black hair."† "I have been forcibly struck," says Mr. Flint, "with the general resemblance in the countenance, make, conformation, manners and habits of the Indians. A savage of Canada and the Rio del Norte are substantially alike; they are all, in my mind, unquestionably from a common stock."‡ One testimony still more explicit, if possible, may be added: Ulloa, upon his return from South America, touched at Louisbourg, at which place, he remarks, "In this and the adjacent islands were a considerable number of inhabitants, born in the country, or on the main land; and, what is remarkable, these

* Pol. Ess., vol. i. pp. 105, 106.

† Ledyard, p. 71.

‡ Flint's Recollections, p. 137.

Indians not only resemble those of Peru in complexion and aspect, but there is also a considerable affinity between their manners and customs; the only visible difference is in stature, and in this the advantage lies visibly on the side of the inhabitants of these northern climates.”*

That this uniformity is universal and applies to all the tribes cannot be maintained, and it would be absurd to suppose that it existed. But yet no varieties have been observed, which approach the Indians anywhere near the white and black races, and where an exception occurs in one particular, the other peculiarities are still retained. It is true, many statements have been made concerning the existence of white and black Indians, but upon examination, they are found to have proceeded usually from the early travellers, who were often vague and exaggerated in their use of terms; or to have been founded upon misnomers; or to have related to tribes who had intermarried with Europeans. An instance of the erroneous conclusions which may be drawn from a misnomer is afforded in a tribe of the Caucasus,† who, though called the “black Circassians, are of a very fair complexion.”‡ Thus, in America, the tribes of the upper Orinoco, who have been styled “White Indians,” according to Humboldt, who had an opportunity for personal examination, differ from other Indians, only by a much less tawny skin, having at the same time, the features, the stature,

* Voyage to S. Am., vol. ii. p. 376.

† Morton's *Crania*, p. 8.

‡ We read also in Herodotus, 5: 49, of the Leuco-Syrii, or White Syrians; and even among the Mongols, there was a tribe called the White Calmucks,—*Heeren, Res.*, vol. i. p. 118, and another, the Golden Horde. *Pallas*, i. 185.

and the smooth, straight black hair of their race.* The Arkansas, in North America, of whom the same assertion has been made, though not of a copper color, are dark and tawny, and possess all the Indian peculiarities of form and feature.† An idea may be gathered of the inaccurate notions formerly prevailing upon this subject by the assertion of Charlevoix, that several tribes, and among them, some of the Esquimaux, have white hair; indeed he adds of the latter nation that they have a beard, “*so thick up to their eyes, that it is difficult to distinguish any features of the face,*” that “*they are tall and pretty well shaped,*” and that “*their skin is white as snow.*”‡ Frezier also says, that the Fuegians are almost as white as Europeans,§ a statement abundantly disproved by subsequent observations.

For the purpose of showing how restricted these apparent exceptions are, and in order to indicate the general predominance of those characteristics which mark the race, it may be well to attempt a brief physical synopsis of the tribes, confirmed by the testimony of various travellers.

The Esquimaux have generally been distinguished from the American race, in consequence of their color, diminutive stature, and other peculiarities, but it is apprehended, that in producing these signs of difference, so far as they really exist, natural causes, such as food, mode of life and climate, have chiefly operated. The strongest evidence, however, of their affiliation to the other Indian tribes is afforded in the physical appearance of the Fuegians, who occupy a region, where similar causes have existed and produced the same results. “The general

* Pers. Nar., vol. v. p. 566, etc. † Nuttall's Arkansas, pp. 83, 84.

‡ Voyage, vol. i. pp. 28, 34, 144. § Frezier's Voyage, p. 34.

form of the Fuegians is peculiar, the head and body being particularly large, and the extremities unusually small; but the feet are broad though short. This peculiarity, no doubt, is owing to their mode of life, etc. From the same cause, want of exercise, this is the form of the Esquimaux and the Laplanders.* The Fuegians have generally straight, long, and jet black hair, scanty beard, a broad face, black, angular Chinese eyes, copper complexion and small stature. In the work just cited, there are several interesting descriptions of particular individuals of this tribe, as follows. "The complexion of this man was dark, his skin of a copper color, the native hue of the Fuegian tribes, the eyes and hair black,—this is universal, as far as I have seen, and predominant throughout all the aborigines of America, from the Fuegians to the Esquimaux." And again, "the features of this individual were rounder, than they generally are among those of his nation, the form of whose countenance resembles that of the Laplanders and Esquimaux. They have broad faces with projecting cheek bones; the eyes of an oval form, and drawn towards the temples." The stature of the Fuegians is generally from four feet ten inches to five feet six inches, and their figures are similar to those of the Esquimaux.†

The Patagonians afford a striking instance, of the exaggerated and gross inaccuracies, which pervade many of the accounts of the Indian tribes. Indeed it is but recently that the

* "We have observed," says Dobrizhoffer, "some resemblance in the manners and customs of the Abipones, to the Laplanders and people of Nova Zembla." Vol. ii. p. 2.

† Voyages of King and Fitzroy, vol. i. pp. 75, 216; vol. ii. pp. 175, 215; vol. iii. p. 142, etc. Byron's Trav., p. 59.

fanciful stories which had been propagated concerning the stature of these natives have been disproved; and a careful examination of all the authorities, together with the observation of recent voyagers, has satisfactorily shown that their height has been greatly over-estimated. The medium stature of this race appears to be from five feet ten inches to six feet. Falkner, however, bore impartial and correct testimony. "The Patagonians, or Puelches," he says, "are a large bodied people, but I never heard of that gigantic race, which others have mentioned, though I have seen persons of all the different tribes of southern Indians." The color of the Patagonians is a rich, reddish brown, rather darker than copper, the head is long, broad, and flat, the forehead low, the face of a square form, the eyes small and often obliquely placed, the nose rather flat, but sometimes aquiline, the hair long, lank, and black, and the beard thin.* Proceeding to the north, the nomade Pehuanches and the Araucanians, according to Mr. Poeppig, "belong to the same branch of the great copper-colored, or Patagonian race." The Araucanians are of a reddish brown or copper color, are finely shaped and muscular, and have small black eyes, a broad face, flattish nose, coarse black hair, and no beard.† One tribe it has been thought offers an exception to this description,—the Boroanes, or Borea Indians living near Valdivia, in Chile. Some of them are said to have light eyes, a fair complexion and red hair.‡ Frazier disposes of this objection, for he says, in speaking of those who are thus distinguished, "these are descended

* King and Fitzroy, vol. i. p. 103; vol. ii. pp. 134, 135.

† Stevenson, vol. i. p. 3. Frazier, pp. 69, 70. Molina, vol. i. p. 234; vol. ii. p. 4.

‡ King and Fitzroy, vol. ii. pp. 402, 465. Molina, vol. ii. p. 4.

from the women taken in the Spanish towns they destroyed;”* his statement is fully confirmed also by Ulloa, who traces this diversity to the same cause.†

The present Peruvian Indians, who are of the same race as the ancient inhabitants, are described as of a copper color, with high cheek bones, small black eyes set widely apart, hair coarse and black, without any inclination to curl, beard scanty, nose somewhat flattened, small stature, and the feet small:‡ these characters are of general prevalence among all the natives. The Bolivian Indians, according to Dr. Ruschenberger, are dark copper-colored, the nose is flattened, and the eyes are obliquely placed.

In general, the same physical description will apply to the numerous hordes of Brazil.§ The Mongul physiognomy is more striking in these tribes, than in those of any other part of America. Prince Maximilian describes one of these Indians as “distinguished from all the rest by his Calmuck physiognomy;” but the same characters are of almost universal prevalence. Passing further to the north, but little variation from this type can be found in the tribes inhabiting Guiana and Colombia. Humboldt has termed the complexion of the Chaymas and other natives of this region, a dull brown or brown-red, inclining to a tawny color, and he adds that they resemble the Monguls, by

* At Valdivia, the native race has been thought to resemble the Hindoos.—*King and Fitzroy*, vol. ii. p. 398. *Frezier*, p. 70.

† Ulloa, vol. ii. p. 287.

‡ Ruschenberger, pp. 217, 380, etc. Ulloa, vol. i. pp. 281, 417. Stevenson, vol. i. p. 376.

§ Graham's *Voyage*, p. 294. Henderson's *Brazil*, pp. 208, 211.

the form of the eye, their high cheek bones, their straight hair, and the almost entire absence of beard.*

The natives of the West India Islands at the discovery consisted of two classes, differing slightly in appearance, and more considerably in manners and character. The Charibs, who occupied the small islands of the southern part of this group, were of a fierce, cruel, and indomitable disposition. The Arrowauks, who resided in the larger and northernmost islands, were of a milder character, and appear to have possessed more of the arts of civilization. The Charibs were of a tawny or dark brown complexion, middling stature, robust and muscular, with small black eyes, long straight black hair, scanty beard, and flat retreating foreheads. The Arrowauks were taller than the former race, and of a reddish brown color, their foreheads were flat, though not so retreating as those of the Charibs, the hair was straight, black, and lank, the beard scanty, the eyes black, cheek bones prominent, the face broad and the nose flat.†

The Mexican Indians have generally "a swarthy and copper color, flat and smooth hair, small beard and squat body, long eye, with the corner directed upwards towards the temples, prominent cheek bones and thick lips."‡ Clavigero says, that the moral and physical qualities of the Mexicans proper, were the same as those of the adjacent nations, so that the description of the one is equally applicable to the rest; he considers the color of the skin, however, as olive.§ According to Humboldt,

* Pers. Nar., vol. iii. p. 223. Temple's Travels, p. 67. Smyth's Nar., pp. 210, 223.

† Edward's Hist. West India Islands, vol. i. pp. 36, 63. Arch.

Am., vol. i. p. 371, 372.

‡ Pol. Ess., vol. i. p. 105.

§ Hist. Mex., vol. i. p. 78.

the Aztec and Otomite tribes have more beard than the others, and many of them wear small mustaches.

The aboriginal inhabitants of Upper California, when first observed by the early Spanish travellers, were of the same stock as those living in the adjoining peninsula. Though the different tribes varied in some unimportant particulars, they bore a general resemblance to each other;—and though some are described as of a diminutive size, they were usually of ordinary stature. They were of a darker color, than the natives of the more southern provinces, their lips were large and projecting, noses broad and flat, foreheads low, beard scanty, and hair straight and black;—long beards, it is said, have occasionally been observed.* This was one of the localities where American negroes have been placed, an idea which the following passage from Venegas may possibly dispose of. “It is known,” he says, “*that some ships have left Mulattoes and Mestizoes at Cape San Lucas.*” “Father Juan de Forquemada, tells us that the Californians showed no manner of surprise, at the sight of negroes, there being some of that cast among them, *the race of those who had been left by a ship from the Philippine islands.*”† The nations near the mouth of the Columbia river generally resemble each other in their physical appearance. Their stature is diminutive, “the complexion is the usual copper-colored brown of the North American tribes, though rather lighter than that of the Indians of the Missouri;” the mouth is wide and the lips are thick, the nose is wide at the extremity, and low between the eyes, the eyes are generally black, the face broad,

* Forbes’ California, pp. 180, 183. La Perouse. Beechey, pp. 304, 337. Handy’s Trav. in Mexico, p. 289.

† Hist. California, vol. i. pp. 58, 94; vol. ii. pp. 238, 354.

forehead flat, and the hair straight and black. The form of the forehead arises from artificial compression of the cranium, which is carried to such an extent, that the forehead often runs in a straight line from the nose to the crown of the head.* Further to the North and along the Pacific, tribes have been observed, which are said to be distinguished by a lighter complexion. The Cheyennes and other tribes on the shores of the southwestern tributaries of the Missouri, though differing somewhat in features and size, "still, in the direction of the eye, the prominence of the cheek bones, the form of the lips, chin, and retreating forehead, are precisely similar" to the Missouri Indians.†

The Osages are a fine race of men, tall, well made, of a tawny red color, with aquiline features, prominent cheek bones and straight black hair. "They do not seem to differ in point of features and color from the Missouri Indians; their stature is by no means inferior to the latter." Mr. Brackenridge also remarks of this tribe, that "they have been noted for their uncommon stature. This is somewhat exaggerated, though they are undoubtedly above the ordinary size of men. The wandering, or semi-wandering nations of Louisiana may be characterized as exceeding the whites in stature."‡ The Arkansas are dark, but not copper-colored, they possess fine aquiline features, scanty beards, long black hair and elongated angular

* Lewis and Clarke, vol. ii. pp. 12, 131. Cox's Adventures on Columbia river, p. 69, 121.

† Long's Expedition, vol. ii. p. 180.

‡ Ibid., vol. ii. p. 242. Description of the Red River, p. 107. Nuttall's Arkansas, p. 186. Brackenridge's Views, p. 69.

eyes.* The same general characteristics as those already indicated, with the exception of a greater prominence of the cheek-bones, mark the Sioux, Pawnees, and other tribes inhabiting the region west of the Mississippi. The Mandans, however, appear to have a lighter color, and though possessing the Indian form in other respects, their hair in some instances is of a light chestnut color and the eyes are of a bluish cast. But connected as they are by affinities in language to other tribes, whose Indian physiognomy cannot be doubted, it is possible that these peculiarities have been produced by an intermixture of the race.

“We see nothing,” says Charlevoix, “in the outward appearance of the Natchez, that distinguishes them from the other savages of Canada and Louisiana;”† the same appears to have been the case with all the southern Indians, and a description of one tribe, will therefore answer for the rest. “The Chickasaws,” says Mr. Adair, “are a comely, pleasant looking people. Their faces are tolerably round, contrary to the visage of the Choctaws, which inclines much to flatness, as is the case of most of the other Indian Americans. The lips of the Indians in general are thin, their eyes are small, sharp and black, and their hair is lank, coarse and darkish; they pluck their beards.”‡

The similarity in the physical appearance of the numerous tribes of the Algonquin-Lenape race and of the Iroquois was equally striking. Smith describes the Powhatans as generally tall and of good proportions, with a brown color, black hair,

* Nuttall's *Arkansas*, pp. 83, 84. Charlevoix, *Voy.*, vol. ii. p. 185.

† Charlevoix, *Voyage*, vol. ii. p. 195.

‡ *Hist. Am. Ind.*, pp. 5, 6.

and little beard.* Loskiel says that "the Delawares and Iroquois, and other nations in league with them, resemble each other much, both as to their bodily and mental qualifications. * * * Their skin is of a reddish brown, nearly resembling copper, but in different shades. Some are of a brown yellow, not much differing from the mulattoes; some light brown, hardly to be known from a brown European, except by their hair and eyes. The former is jet black, stiff, lank and coarse, and almost like horse hair."† Smith describes the Iroquois as tall, beardless, of a tawny complexion, and having black uncurled hair;‡ and Charlevoix, as of a lofty stature, with black hair and a scanty beard. "The color of the savages," he says, "does not prove a third species between the white and black, as some people have imagined. They are very swarthy and of a dirty dark red." The Knisteneaux, a branch of the Algonquin race, who had penetrated the farthest towards the north-east, and inhabited the territory from the Atlantic to the shores of Hudson's Bay, the St. Lawrence and Churchill rivers, are described by Mr. McKenzie§ "as of moderate stature. Their complexion is of a copper-color, and their hair black, which is common to all the natives of North America. It is cut in various forms according to the fancy of the several tribes, and by some is left in the long lank flow of nature. They very generally

* Voyages and Discoveries, vol. i. p. 128.

† History, etc., p. 12. Van Der Donck's New Netherlands, N. Y. Hist. Soc. Coll., vol. i. p. 190. De Laet, *ibid.* p. 312.

‡ Smith's Hist. N. Y., vol. i. p. 69. Charlevoix, vol. ii. pp. 60, 69. This author fell also into the erroneous notion that the Indians were born white.

§ McKenzie's Journal, p. 387.

extract their beards," "their eyes are black, keen and penetrating—their countenance open and agreeable." Some individuals have been seen with full beards.* The tract of country situated to the north-west of the Knisteneaux is inhabited by the Chippewyans—all the territory between 60° and 65° N. L. and Long. 110 and 100 West, they consider as their lands and home. But tribes of this race border in the east on the Knisteneaux, and extend on the west to the Pacific, and on the north to the territory of the Esquimaux. At least this is to be inferred from ethnographical analogies, for tribes who speak their language are found over this vast district even as far south as Lat. 52 North, on the Columbia river.† "Their complexion is swarthy," says McKenzie, "their features coarse, and their hair lank—but not always of a dingy black—nor have they universally the piercing eye which generally animates the Indian countenance." "The men in general extract their beards, though some of them are seen to prefer a bushy black beard, to a smooth chin."‡ The tribes situate to the westward in the vicinity of the Pacific, have been described in a similar manner, with the exception of their complexion, which is said to be of a "light copper-color,"§ accompanied with long lank hair and black eyes. Mr. Hearne remarks of these Indians, that their complexion "is somewhat of the copper cast, inclining rather towards a dingy brown," that their foreheads are low, cheek bones high, eyes small, and their hair black, strong and straight.

* A General History of the Fur Trade, p. 89.

† McKenzie's Journal, p. 387. Hist. Fur Trade, p. 111. Cox's Adventures on the Columbia River, appendix, pp. 334, 331.

‡ Hist. Fur Trade, p. 114.

§ Cox, p. 324.

"Few of the men have any beard; this seldom makes its appearance until they arrive at middle age."*

The Esquimaux inhabit all the northern regions of the continent stretching along the Arctic seas from the Atlantic to the Pacific, and a considerable distance south along the shores of the two oceans. The western tribes appear to be the most assimilated to the general type of the American race, and as their language and customs connect them with those towards the east, it is possible that the varieties observed in the color and features of the latter are owing to foreign causes. Generally upon the northern coast opposite to Asia, the inhabitants are stout and short, of a swarthy color, with thick lips, black eyes and hair, thin beard, and high cheek bones.† Further to the east, the Esquimaux met by Hearne, on the Coppermine river, are described as of small stature, and a dirty copper-colored complexion, though some of the women are more fair.‡ According to Crantz this race are of a dwarfish size, the face is broad and flat, the cheek bones high, the eyes black, the hair long, straight and black, and the hands and feet small.§ Their color, he says, is olive, though there are some who have a moderately white skin, *but the children are born white*. Captain Back in Lat. 67° Long. 94° observed Esquimaux who had a luxuriant growth of beard; their eyes were obliquely placed; and it is remarkable that they were not tattooed.

"The male Esquimaux have rather a prepossessing physi-

* Hearne's Journey, p. 305.

† History Kamtschatka, pp. 46, 47. Coxe's Russ. Disc., pp. 146, 256. Beechey's Nar., p. 210.

‡ Hearne's Journey, p. 166.

§ Hist. Greenland, vol. i. 133.

ognomy, but with very high cheek bones, broad foreheads and small eyes, rather farther apart than those of a European. The corners of their eyelids are drawn together so close, that none of the white is to be seen; their mouths are wide and their teeth wide and regular. The complexion is a dusky yellow, but some of the young women have a little color bursting through this dark tint. The noses of the men are rather flattened, but those of the women are rather prominent. The males are, generally speaking, between five feet five inches and five feet eight inches high, bony and broad shouldered, but do not appear to possess much muscular shape." "But the most surprising peculiarity of this people is the smallness of their hands and feet."* Captain Graah says, "the *Greenlanders* inhabiting the southern part of the west coast, (and it is to be observed, this is the coast upon which the ancient Icelandic settlements were probably made,) have little in their exterior in common with genuine *Esquimaux*; and the inhabitants of the country about the bay of Disco in North Greenland, and the natives of the east coast seem to me to have still less. They have neither the full fleshy person, nor the prominent paunch of the *Esquimaux*, but are on the contrary slender and even meager. They are moreover distinguished from the *Esquimaux*, by a uniformity of head and cast of countenance which is handsomer and more expressive. The women and children have many of them brown hair, and a complexion scarcely less fair than that of our peasantry," etc. "But as I should not venture to conclude, that the *Esquimaux* about Hudson's Bay have any claims to the honor of a Roman parentage from the circum-

* Chappell's Narrative, p. 9. A Voyage to Hudson's Bay, pp. 58, 59.

stance of Sir Edward Parry's having seen many a good Roman nose among them, neither do I conceive, that the natives of the east coast of Greenland are descended from the old Icelandic colonies, because in some points they resemble Europeans. Their lank hair, their black and somewhat Chinese eyes, their disproportionally large hands and feet, their temper and disposition, their manners, customs and language, all indicate that they are of the same stock originally with the Esquimaux." "Some few of them wear beards and mustaches, but by far the greater number eradicate the beard as it appears." Captain Parry says of some Esquimaux, North Lat. 67° Long. 85°, "their countenances at the time impressed me with the idea of Indian rather than of Esquimaux features—but this variety of physiognomy we afterwards found not to be uncommon among these people."*

The same traveller in his general description of those at Winter island and Igloolik, observes that they are of low stature, their hands and feet are remarkably small, their faces are generally round and full, eyes small and black, nose also small and sunk far in between the cheek bones, but not much flattened. "In the young of both sexes the complexion is clear and transparent, and the skin smooth. The color is scarcely a shade darker than that of a deep brunette, so that the blood is plainly perceptible when it mounts into the cheeks; the eyes are not horizontal, but much lower at the end next to the nose, than at the other. The hair is black, glossy and straight. The men wear the hair on the upper lip and chin from one to one and a half inches in length,—and some were distinguished

* Parry's Second Voyage, p. 73.

by a little tuft between the chin and lower lip.* It seems most probable, therefore, that the aberrations from the general physical standard, observed in the eastern Esquimaux, have been occasioned by a European intermixture; by intermarriages, probably, with the lost Icelandic colonists alluded to by Captain Graah. Of the western branches of the race the color and features are essentially the same as those which characterize the aborigines generally. It thus appears that a most striking physical uniformity prevails among all the American tribes, that the variations from the predominant type are trifling and infrequent, and where they do exist, may in several cases be traced to intermarriages with individuals of the white or black race.†

It remains to inquire whether the ancient and civilized nations of the United States, Peru, and Mexico belonged to the same race. If the tribes now inhabiting Mexico and Peru are to be regarded as the descendants of those nations, the question would meet an easy solution; but the peculiar conformation of the ancient skulls found in the mounds, and the singular physiognomy observed in the human representations upon the Mexican paintings and monuments, afford some cause for hesitation. But it should be remembered that in the early stages of art, there is a tendency to delineate monstrous and exaggerated figures, which at a subsequent period, when more elegance and correctness are attained, custom, prejudice and superstition having once rendered sacred, are never abandoned. The Egyptians, says Plato, having once determined upon the forms

* Parry's Second Voyage, p. 405.

† The light complexion of some of the Botocudos in Brazil has been traced to the same cause.

to be exhibited in their paintings and sculptures, it was no longer lawful for painters or other imitative artists to attempt any innovation. That such an arbitrary rule prevailed in Mexico, where, from the absence of the art of writing, it became necessary to adhere to the forms which had been adopted in their hieroglyphical paintings, not only appears reasonable, but is manifest by the most cursory examination of the picture-writings. Accordingly we find in some cases, particularly in their sculpture, when it was designed to represent real individuals, that the style is changed, and the figures approach nearer to the present Indian physiognomy. In one respect the representations on the monuments and paintings are assimilated to the type of the Red race; for with the exception of some sacred figures probably intended to denote the white and bearded Quetzalcoatl, they are all delineated as beardless.* The enormous size of the nose, which it is difficult to suppose ever characterized any people, was naturally exaggerated by the first artists, in consequence of the retreating forehead, with which it was accompanied. The custom of cranial compression was common to many American nations, and may be clearly traced, not only to the barbarous, but civilized races. The unusual forms thus given to the skull are not universally the same. Thus Charlevoix observes, "there are on this continent some nations, which they call Flat-heads, which have, in fact, their foreheads very flat, and the top of their heads somewhat lengthened. This shape is not the work of nature: it is the mothers who give it to their children, as soon as they are born. For this end, they

* This is the case also with the sculptured and earthenware figures found in the mounds of the United States.

apply to their foreheads, and the back part of their heads, two masses of clay, or of some other heavy matter, which they bind by little and little, till the skull has taken the shape they desire to give it. * * * It is quite the reverse with certain Algonquins amongst us, named Round-heads, or Bowl-heads, (Têtes de Boules,) whom I have mentioned before, for they make their beauty consist in having their heads *perfectly round*, and mothers take care also very early to give them this shape.”* Adair describes another form among the Choctaws and other southern tribes. “The Indians flatten their heads,” he remarks, “in divers forms, but it is chiefly the crown of the head they depress. * * The Choctaw Indians flatten their foreheads from the top of the head to the eyebrows, with a small bag of sand; which gives them a hideous appearance, as the forehead naturally shoots upwards, according as it is flattened; thus the rising of the nose, instead of being equi-distant from the beginning of the chin to that of the hair, is by their wild mechanism placed a great deal nearer to the one and further from the other.” The same practice, he adds, prevails among the tribes “*around South Carolina and all the way to New Mexico.*”† According to we find that the Waxsaws and Natchez distorted the natural shape of the head by similar artificial means.‡ The Flat-head tribes west of the Rocky mountains and on the Columbia river have carried the same custom to a frightful extent; their heads present an inclined plane from the crown to the upper part of the nose,—a peculiarity which is produced in the fol-

* Voyage, vol. i. pp. 83, 84.

† Adair's Hist. N. Am. Indians, p. 8.

‡ Morton's Crania, pp. 161, 162.

lowing manner. "Immediately after birth, the infant is placed in a kind of oblong cradle, formed like a trough, with moss under it. One end, on which the head reposes, is more elevated than the rest. A padding is then placed on the forehead, with a piece of cedar bark over it, and by means of cords passed through small holes, on each side of the cradle, the padding is pressed against the head. It is kept in this manner upwards of a year. * * When released from this inhuman process, the head is perfectly flattened, and the upper part of it seldom exceeds an inch in thickness."*

The Charibs compressed the heads of their infants by boards and ligatures, and rendered the forehead so flat, "that they could see perpendicularly when standing erect;"† and the Arrowauks practised the same custom, endeavoring, however, to give the crown of the head a greater elongation.

In South America, according to Condamine, "the appellation Omaguas, in the language of Peru, as well as Cambevas in that of Brazil, given to the same people by the Portuguese of Para, signifies Flat-heads. For they have the whimsical custom of pressing between two plates the forehead of their newly born children, in order to give them this singular shape, and make them, as they say, resemble the full moon."‡ "Among the variety of singular customs prevailing in these nations," says Ulloa, "one cannot help being surprised at the odd taste

* Ross Cox's *Adventures on the Columbia River*, pp. 69, 166. Lewis and Clarke, vol. ii. p. 131.

† Sheldon, in *Arch. Am.*, vol. i. p. 372. Lawrence's *Lectures*, p. 237.

‡ Condamine, in Pinkerton, vol. xiv. p. 226.

of the Omaguas, a people otherwise so sensible, who, to render their children what they call beautiful, flatten the fore and hind parts of the head, which gives them a monstrous appearance; for the forehead grows upwards, in proportion as it is flattened, so that the distance from the rising of the nose to the beginning of the hair, exceeds that from the lower part of the nose to the bottom of the chin. And the same is observable in the back part of the head: *the sides also are very narrow from a natural consequence of the pressure*; as thus, the parts pressed, instead of spreading conformable to the common course of nature, grow upwards. This practice is of great antiquity among them, and kept up so strictly, that they make a jest of other nations calling them calabash-heads. In order to give children this beautiful flatness, the upper part of the head is put, soon after their birth, betwixt two pieces of board, and this is repeated from time to time, till they have brought the head to the fashionable form.”* The Mantas, consisting of several tribes subdued by the Incas, are described by Garcillasso de la Vega, as having their heads very much deformed. “As soon as their children were born, they applied to the front of the head and *the back of the neck* two small boards, between which they compressed the head, until they had arrived to the age of five years; and by these means the head became *flat and very long*.”† There are various authorities to show that artificial pressure of the cranium was common to many Peruvian nations, and none more satisfactory than the decree of the Synod of Lima, (passed 1585,) cited by Blumenbach, which prohibited the custom,—at

* Ulloa, vol. i. p. 411.

† “Sur le front, et sur le chignon de cou.”—*Fr. Trans.*, 1737.

the same time alluding to it as formerly universal in Peru.* Dr. Morton has traced it likewise into Venezuela and Nicaragua. The same learned naturalist in his researches into American craniology has arrived at the conclusions, that the American nations, excepting the Polar tribes, are of one race and one species, but of two great families, which resemble each other in physical, but differ in intellectual character, and that the cranial remains discovered in the mounds, from Peru to Wisconsin, belong to the same race, and probably to the Toltecan family. The skulls from the mounds are described as being flattened on the occiput and frontal bones, "in such manner as to give the whole head a sugar-loaf or conical form, whence also their great lateral diameter and their narrowness from back to front," and the result of his investigation seems to be, that this peculiar configuration, as well as that of the Mexican heads represented in their sculptures and paintings, appears to result in part from the application of mechanical pressure.

But there are other crania brought by Mr. Pentland from Peru, which it is supposed belong to an ancient and extinct race. They are remarkable for their unusually great length and narrowness; the face is very projecting, the forehead retreating, so that the facial angle is smaller than in any known race of men; the os frontis is continued far backwards towards the vertex, and is very long, narrow and flat. By the discovery of these skulls the interesting question has been presented to naturalists, whether they are of a natural form, or altered by art. Professor Tiedemann says, "a careful examination of these skulls

* Lawrence's Lectures, p. 237. Ruschenberger. Morton's Crania, p. 147.

has convinced me that their peculiar shape cannot be owing to artificial pressure. The great elongation of the face, and the direction of the plane of the occipital bone are not to be reconciled with this opinion, and therefore we must conclude that the peculiarity of shape depends on a natural conformation. If this view of the subject be correct, it follows that these skulls belonged to a race of men now extinct, and which differed from any now existing." But it is clear that the habit of mechanical compression of the head was common to many American nations, and prevalent in Peru. "There is no race on the globe," says Humboldt, "in which the frontal bone is more depressed backwards, than the American." * * "The custom of flattening the head had its origin, in the idea that beauty consists in such a form of the frontal bone as to characterize the race in a decided manner." In fact Waldeck saw in Yucatan profiles of the present Indian race, similar to those sculptured at Palenque; * those ancient profiles, he says, are at an angle of 74° , which must be attributed to the custom of flattening the head. It is true these differ in form from those of Peru under consideration, but the alteration by compression has been as great. In view of the various processes which were used, the nature of the substances which were applied, and the parts which were compressed, it does not seem improbable that the singularly shaped Peruvian skulls may have been altered by artificial means. The tendency of the cranium to lateral expansion under a pressure from the front and back, which does not appear to have taken place in these heads, may have been prevented by ligatures or other mechanical applications to the sides of the

* Voyage Pittoresque, p. 24.

head. The testimony of Dr. Pritchard is strongly to this point; "it is more probable," he says, "that the ancient skulls of Titicaca owed their strange configuration to a process, which we know is capable of explaining the phenomena, than that they constituted an original race, a circumstance of which we have no other evidence than that derived from the shape of the cranium.* Professor Scouler has given the sketch of an infant skull of one of the Columbian tribes, which is as much elongated as the skulls brought by Mr. Pentland from Titicaca."† It thus appears that there are no decided and general characteristics yet clearly ascertained, which separate any of the ancient civilized nations from the great American family,—nor any peculiar cranial conformations, which might not be justly attributed to the prevalent custom of altering the head by mechanical applications, so as to produce that form, which, according to aboriginal notions, possessed the highest degree of beauty.

In the prosecution of our inquiry as to the number of primitive races, it becomes necessary to examine in the next place, in what points of physical appearance the American and Mongolian races are assimilated.

The Mongolian variety. The Mongols have exercised an important influence in the affairs of Oriental Asia, having at different periods subjected Hindostan, Siam, Thibet and China. Hordes of this race roam over the vast regions of Siberia, and are found wandering from China to the banks of the Dneiper;‡ and it is probable that in ages far beyond the scope of authen-

* The hair upon these heads certainly establishes one point of connection with the Red race, for it is uniformly lank, long and black.

† Pritchard's *Physical Researches*, vol. i. pp. 316, 320.

‡ Dr. Clarke's *Travels*, part i. pp. 155, 159.

tic history they have been distributed still more widely. Considerable confusion has been occasioned by the incorrect application of the term Tartars to the Turkish race, an appellation which is now too well settled to admit of change. It appears to have been originally applied by Asiatic writers to the Mongol race, and when the Turkish tribes were subdued by them, the name passed from the princes, who were Mongols, to their subjects. "Remusat, who, with Klaproth, had determined the original identity of the Mongols and Tartars, proposed to confine the latter appellation to the former race. But in the utter commixture of the northern tribes, to use Tartar as a generic name, would lead but to further confusion."* The Tartars, as the term is now understood, belong to the Caucasian family, and in their physical characteristics they are distinguished by an oval head, a fresh, white complexion, and great beauty and symmetry of countenance.† The Mongol physiognomy is widely different, and is nearly allied to the American; the complexion is described by most physiologists as of an olive or yellow color, but as will be seen, there are some tribes in Siberia of a regular copper color. Commencing on the western shore of Behring's straits, we find the Tchutski, who are divided into two classes, the Sedentary and the Wandering. They may be clearly identified with the American family, as well by their language‡ as by their manners, customs and appearance, and it is thought they are of American origin. They speak the same language,

* Travels by Rose, Ehrenburgh and Von Humboldt, in *For. Quar. Rev.*, No. 40.

† Tooke, vol. i. p. 280; vol. ii. p. 44.

‡ *Arch. Am.*, vol. ii. p. 10. Cochrane's *Pedestrian Tour*, pp. 203, 198, 274.

however, as the Koriacks, or Korœiki, a tribe in their vicinity. The resemblance in their customs to those of the Americans is not peculiar to this nation, but is common to many others of Siberia, and no argument therefore in favor of their American origin can be drawn from that circumstance.* “From what I have seen of the Koriacks,” says Cochrane, “I have no doubt of their being of the same tribe as the Tchutski; they have the same features, manners and customs, and the same language.” According to a Russian author of great authority, “the language of the Tchutski is derived from that of the Koreki, and differs from it in dialect only;”† “they agree in most of their customs and habits with the Kamtschatdales,” and “the Tchutski should be accounted a race of the Koreki.” The Koriacks are also divided into two tribes; the wandering family are of smaller stature. They are described as having long black hair, small eyes, a short nose, and large mouth.‡ Strahlenburgh says that they have no beards, but only a few loose hairs scattered over their chins. “The Lutorzi,” he adds, (the Tchutski?) “who live eastward of the former, and towards the coast of the main ocean, were as to shape, customs and language, the very same with the Korœiki, except that they made their habitations under ground.” “They are *beardless* like the Laplanders, Samoides and Ostiacs; for in the first place they have naturally very little hair about the mouth, and what little they have, they pluck out, *as do also the Yakuti, Tungusi and Kalmucks.*”§

* See Plescheef, pp. 49, 52. Sauer's Expedition, pp. 254, 257, 322. Pennant, vol. i. p. 264. Ledyard, 246.

† Krasheninicoff's Hist. Kamtschatka, trans. by Grieve, p. 47.

‡ Ibid. p. 222.

§ Strahlenburgh, appendix, pp. 458, 396.

The Kamtschatdales are swarthy, of a small stature, have straight black hair, high cheek bones, oblique eyes and scanty beard. It has been supposed of this people, as well as of the Tchutski, that they were of American origin; an idea which Captain Cochrane pronounces ridiculous.*

The Yakuts are of a low stature, with long black hair, but little beard, and "their complexion is a light copper-color."† The Mantchoos belong to the Tongoo, or Tungusi race, and resemble them in appearance and features;‡ and the latter, besides the oblique eye, black hair and slender beard of the Mongols, are described as "copper-colored."§

The Burretti, the Calmucks, and the Mongols near Bogdo, are all described as of a complexion varying from a yellow or swarthy hue to a brownish red or copper-color, with small beards, black hair, and oblique eyes.||

The Chinese, Japanese, Siamese and other inhabitants of Indo-China, all present the same general physical type, modified in various degrees, but conforming in a great measure to the characters of the Mongols; and the same race appears to have penetrated into Thibet, Bootan, and Nepaul.¶ The close analogy which exists between the Mongol and American families, notwithstanding certain diversities which have been observed, cannot be better illustrated than by the testimony of

* Pedestrian Journey, pp. 293, 294.

† Ibid. p. 327.

‡ Coxe's Russ. Disc., p. 197.

§ Cochrane, p. 140, 141. Ledyard, p. 243.

|| Plescheef, p. 67. Tooke, vol. ii. p. 282. Cochrane, p. 95.

¶ Crawford's Siam, vol. ii. p. 3. Cuvier, Règne Animal, vol. i. p. 54.

travellers, and of those who have had personal opportunities for direct comparison.

"There is a great resemblance in feature," says Mr. Andrews, "between these Indians along the banks of the Rio Chico in South America, and some of the people I have seen in the east, especially the mixed breed of Chinese and Malay in Java. The high cheek bone, sharp angular eyes, and small beards, agree."*

"I shall only remark further," observes Mr. Bell, "that from all the accounts I have heard and read, of the natives of Canada, there is no nation in the world which they so much resemble as the Tongoos."†

"The American race," says Humboldt, "has a striking resemblance to the Mongol nations, which include those formerly called Huns, Kulans, and Kalmucks."

"The Viceroy of Brazil retains a dozen of the native Indians in his service, as rowers of his barge. We observed the Tartar or Chinese features, *particularly the eye*, strongly marked in the countenances of these Indians. The *copper tinge* was rather deeper than the darkest of the Chinese, but their beards, being mostly confined to the upper lip, and the point of the chin, together with their strong black hair, bore a very near resemblance."‡

Chinese colonists have been imported into Brazil, and afford a valuable opportunity of contrasting their appearance with the native Americans. "The physiognomy of the Chinese colon-

* Andrews' Travels in S. Am., p. 76.

† Bell's Journey, p. 176.

‡ Barrow's Travels, p. 30.

ists," say Spix and Martius, "was particularly interesting to us, and was in the sequel still more so, because we thought we could perceive in them, *the fundamental lines which are remarked in the Indians*. The figure of the Chinese is indeed rather more slender, the forehead broader, the lips thinner and more alike, and the features in general more delicate and mild, than those of the American who lives in the woods; yet the small, not oblong, but roundish, angular, rather pointed head, the broad crown, the prominent sinus frontales, the low forehead, the pointed and projecting cheek bones, the oblique position of the small narrow eyes, the blunt, proportionally small, broad flat nose, the thinness of the hair on the chin, and the other parts of the body, the long smooth black hair of the head, the yellowish or *bright reddish tint* of the skin, are all characteristics common to the physiognomy of both races. The mistrustful, cunning, and, as it is said, often thievish character, and the expression of a mean way of thinking, and mechanical disposition appear in both, in the same manner. In comparing the Mongol physiognomy with the American, the observer has opportunity enough to find traces of the series of developments, through which the eastern Asiatic had to pass, under the influence of the climate, in order to be transformed into an American. In these anthropological investigations we arrive at the remarkable result, that certain characteristics, which constitute the principal difference of the races, do not easily pass into others, whereas, those which depend only upon *more or less*, gradually vanish or degenerate, through a series of different gradations."*

* Travels in Brazil, vol. i. p. 277.

Of the Chiriguanos, a Peruvian tribe, Mr. Temple says, "They are of a copper-color, approaching to sallowness, with long shining black hair, and as the Indians of South America generally are, without beards. Had I seen them in Europe I should have supposed them to be Chinese, so closely do they resemble those people in their features."*

"In some points of physiology," remarks Mr. Davis of the Chinese, "the people whom we describe bear a considerable resemblance to the North American Indians. There is the same lank, black, and shining hair, the same obliquity of the eyes, and eyebrows turned upwards at the outer extremities, and a corresponding thinness, and tufty growth of beard. The Chinese, too, is distinguished by a nearly total absence of hair from the surface of the body. * * * We may remark here that the Esquimaux, as represented in the plates to Captain Lyon's Voyage, bear a very striking resemblance to the Tau-kea, or 'boat-people' of the coast of China, who are treated by the government as a different race from those on shore, and not allowed to intermarry with them. Whether the miserable inhabitants of the cold regions to the north, have thus migrated southward, along the coast, at some former periods, in search of a more genial climate, must be a mere matter of conjecture, in the absence of positive proof."†

Mr. Ledyard, who had personal opportunities of observing the peculiar physiognomy of the American Indians, and who had travelled through Siberia, is still more positive in his assertions, as to the resemblance between the Americans and Mongols. His testimony being of the highest kind, deduced from

* Temple's Travels in Peru, vol. ii. p. 184.

† The Chinese, by I. F. Davis, vol. i. p. 251.

his own personal examination, we shall quote extensively from his remarks upon this subject, premising that in his use of the term Tartar, he applied it to all those tribes possessing the Mongol physical characteristics. In a letter to Mr. Jefferson, from Siberia,* he says, "I shall never be able, without seeing you in person, and perhaps not then, to inform you how universally and circumstantially *the Tartars resemble the aborigines of America*. They are the same people—the most ancient and the most numerous of any other; and had not a small sea divided them, they would all have been still known by the same name." * * "I know of no people among whom there is such a uniformity of features, (except the Chinese, the Jews, and the Negroes,) as among the Asiatic Tartars. They are distinguished indeed by different tribes, but this is only nominal. Nature has not acknowledged the distinction, but, on the contrary, marked them, wherever found, with the indisputable stamp of Tartars. Whether in Nova Zembla, Mongolia, Greenland, *or on the banks of the Mississippi*, they are the same people, forming the most numerous, and, if we must except the Chinese, the most ancient nation of the globe: but I, for myself, do not except the Chinese, because I have no doubt of their being of the same family." * * "I am certain that all the people you call *red* people on the continent of America, and on the continents of Europe and Asia as far south as the southern parts of China, are all one people, by whatever names distinguished, and that the best general name would be Tartar. I suspect that all *red* people are of the same family." And again: "With respect to the national or gene-

* Spark's Life of Ledyard, pp. 66, 201, 246, 255.

alogical connection which the remarkable affinity of person and manners bespeaks between the Indians on this and on the American continent, I declare my opinion to be, without the least scruple and with the most absolute conviction, *that the Indians on the one and on the other are the same people.*"

The Malays. In the vast insular regions of the Pacific, Indian and Southern oceans, it is supposed several distinct varieties of the human family have been traced.

That class which resembles the Negroes, and which, together with its various intermixtures, has been found inhabiting New Holland, New Guinea, New Caledonia, Van Diemen's Land, the Andaman, Philippine, Molucca, Fejee and other neighboring islands, we have already adverted to. The other comprises all those nations denominated Malays and Polyynesians, and which, from a general and striking analogy observable in their appearance, customs and language, have usually been arranged by physiologists under the human variety entitled the Malay. They occupy the Malayan peninsula, Sumatra, Borneo, Java and other East Indian islands, and all those remote groups of the Pacific extending to Easter island near the American continent, and from the Sandwich islands on the north, to New Zealand in the Southern ocean. They may perhaps be justly divided into two orders, the Malays proper and the Polyynesians.

The Malays, in the opinion of Cuvier, are not easily referrible to either of the three great races, but he adds, "Can they be clearly distinguished from their neighbors, the Caucasian Hindoos and the Mongolian Chinese? As for us, we confess we cannot discover any sufficient characteristics in them for that purpose."*

* Règne Animal, vol. i. p. 55, Am. Edit.

M. Lesson, also, who has bestowed great research upon these insular nations, has concluded that the Malays are a mixed race of Mongols and Indo-Caucasians.*

The complexion of the Malays is brown, from a light tawny or yellow hue to a deep bronze; the hair is long, lank and black, the beard weak; their eyes are black and oblique, the nose full and broad towards the apex, the mouth large, the bones of the face large and prominent, and the head narrow and compressed. Their persons are generally below the middle size and somewhat robust.†

The real Polynesian nations are described generally as of a dark complexion, varying from olive through shades of reddish brown to a copper-color, with long black hair, straight or curling, and scanty beards.‡ “The general complexion of both men and women (of the Polynesian tribes) is a dark coppery brown, but it varies from the lightest hue of copper to a rich mahogany or chocolate, and in some cases almost to black.”§ Sometimes features are observed which approach to the Caucasian variety.

The natives of the Sandwich islands are described by Mr. Ellis as “in general, rather above the middle stature, well formed, with fine muscular limbs, open countenances, and features frequently resembling those of Europeans.” “Their hair is black or brown, strong, and frequently curly. Their com-

* M. Lesson, *Voyage du Coquille*, Zool., p. 43, cited in Morton's *Crania Americana*, p. 56.

† Marsden's *Hist. of Sumatra*, pp. 38, 45. Malte Brun, vol. iii. p. 414. Lawrence's *Lectures*, p. 367.

‡ Ellis's *Poly. Res.*, vol. i. pp. 73, 74. Marshall's *Voyage*, in *Mav.*, vol. ix. p. 157. Porter's *Voy.*, pp. 114, 111, 96.

§ King and Fitzroy, vol. ii. p. 570.

plexion is neither yellow like the Malays, nor red like the American Indians, but a kind of olive and sometimes reddish brown.”*

Mr. Ledyard remarks of the inhabitants of the Society islands, that “they are tall, strong, well limbed, and fairly shaped.” “Their complexion is a clear olive or brunette, and the whole contour of the face quite handsome, except the nose which is generally a little inclined to be flat. Their hair is black and coarse. The men have beards, but pluck the greatest part of them out.”†

Of the Otaheitans, Captain Fitzroy says, “To my eye they differed from the aborigines of southern South America, in the form of their heads, in the width or height of their cheek bones, in their eyebrows, in their color, and most essentially in the expression of their countenances. High foreheads, defined and prominent eyebrows, with a rich bronze color, give an Asiatic expression to the upper part of their faces; but the flat noses (carefully flattened in infancy) and thick lips, are like those of the South Americans.”‡

The natives of the Pelew islands are of a deep copper-color, with long black hair and scanty beard. They are well made and of middle stature. The inhabitants of Easter island were a handsome race with oval countenances, jet black hair, scanty beard, and black eyes.

Here again, the resemblance between the Malays and Polynesians and Americans has attracted the attention of those who have possessed the opportunity of comparing their physical ap-

* Missionary Tour through Hawaii, p. 22. † Ledyard, p. 62.

‡ King and Fitzroy, vol. ii. p. 509. Wilson's Voyage, in Mavor, vol. ix. pp. 15, 64. Beechey's Voy., p. 43.

pearance. Of the Indians of Acapulco, in Mexico, Captain Basil Hall observes, "Their features and color partake somewhat of the Malay character; their foreheads are broad and square; their eyes small and not deep seated; their cheek bones prominent, and their heads covered with black straight hair; their stature about the medium standard, their frame compact and well made."*

"I had not long since," says Mr. Smith, "a striking proof of the visible resemblance between the figure, countenance, and whole appearance of the Malay and the American Indian. Mr. Van Polanen, late minister from the late Republic of Holland to the United States, and afterwards holding a high office at the Cape of Good Hope, and in the island of Java, on his return from the East, fixed his residence in Princeton. He brought with him two Malay servants. As they were one day standing in his door, there happened to pass by two or three Indians belonging to a small tribe, which still holds some lands in the state of New Jersey. When they approached the door, the attention of each party was strongly arrested by the appearance of the other. They contemplated one another with evident marks of surprise; and by their signs and gestures discovered their mutual astonishment at seeing such a likeness to themselves. Every person, indeed, who sees these Malays and is acquainted with the countenance of our native Indians, is forcibly struck with the resemblance. The chief difference between them is, that the features of the Malays are more soft, the cheek

* Voyage to South Am., vol. ii. p. 175. See also Dr. Lang's View of the Polynesian Nations, p. 185.

bone not quite so much raised, and the outline of the face somewhat more circular.”*

“My first impression upon seeing several New Zealanders in their native dress and dirtiness, was that *they were a race intermediate between the Otaheitans and Fuegians*, and I afterwards found that Mr. Stokes and others saw many precise resemblances to the Fuegians; while every one admitted their likeness to the Otaheitans. *To me they all seem to be one and the same race of men, altered by climate, habits, and food, but descended from the same original stock.*” And again, “a word about the inhabitants and I leave the Keelings (islands). No material difference was detected by me between the Malays on these islands, and the natives of Otaheite and New Zealand. I do not mean to assert that there were not numbers of men at each of those islands, to whom I could not trace resemblances, (setting individual features aside) at the Keelings. I merely say that there was not one individual among the two hundred Malays I saw there, whom I could have distinguished from a Polynesian islander, had I seen him in the Pacific.”†

Having thus exhibited some of the facts which tend to indicate that the number of original races may justly be restricted to three, the white, the red, and the black, and that the American, Malay, Polynesian, and Mongolian nations are members of the red race, and retain in various degrees the characters of its original type, it is necessary next to inquire into what other countries this ancient family may be traced.

* Smith's Essay, p. 217, note.

† King and Fitzroy, vol. ii. p. 567. Ibid. vol. ii. pp. 635, 636.

The Scythians were apparently a Mongol tribe; the physical description given of them by Hippocrates, who speaks of their scanty growth of hair and other peculiarities, according to Niebuhr, is conclusive upon this point. Hippocrates considered them as a distinct race, and remarked the universal resemblance of all the Scythians, a character which marks likewise the American family.*

Humboldt has traced some analogies in the general character of the human figures in the Mexican picture-writings, to some of those which have been preserved on the Etruscan monuments, and considers their dwarfish size, and the great largeness of the head, as peculiarities to be observed also in the Etruscan reliefs. The description given by Sir William Gell, of the men represented upon the walls of the tombs at Tarquinii, corresponds in a great degree with the physical characters of the Red race, as depicted upon some of the American monuments. "It is singular," he says, "that the men represented in these tombs are all colored *red*, exactly as in the Egyptian paintings in the tombs of the Theban kings: their eyes are very long; their hair is bushy and black; their limbs lank and slender; and the facial line, instead of running, like that of the Greeks, nearly perpendicular, projects remarkably, so that in the outline of the face, they bear a strong resemblance to the negro, or to the Ethiopian figures of Egyptian painting."†

Hindoostan contains many dissimilar races; in many portions of this vast country there are wild tribes, some of whom approach to the type of the Red race. Thus the Garrows, and the

* Niebuhr's *Researches into the History of the Scythians*, pp. 46, 83.

† Vol. i. p. 390.

Lunctas, and the Puharries resemble the Chinese and the people of Eastern Asia. Bishop Heber says, "the great difference in color between different natives struck me much. Of the crowd by whom we were surrounded, some were black as negroes, others merely copper-colored, and others little darker than the Tunisines."* According to Mr. Orme, the color of the Hindoos is either that of copper or of the olive, with the various intermediate shades; the hair is long, fine, and jet black, the lips larger than those of Europeans, the eyes black, and the eyelids long. In general, also, the head is thin, the face oval, and the stature small. Niebuhr remarks that none of the figures at Elephanta have beards, and this is the case with many of those at Ellora. In one of the caves near Bang, in Malwah, which is decorated with a beautiful *Etruscan* border, "on the lower parts of the wall and columns, have been painted male and female figures of a *red or copper-color*, the heads of which have been intentionally erased. What remains shows them to have been executed in a style of painting, far surpassing any modern specimens of native art."†

But it is in Egypt that we find the clearest evidences of the ancient existence of the Red race. The Copts, who are the degraded descendants of the Egyptians, though now a mixed race, are described as having a dusky and yellowish color, black and large elongated eyes slightly inclining from the nose upwards, thick lips, thin beard, the hair black and curly, high cheek bones, and a flat forehead.‡ But the people who at pre-

* Heber, vol. i. p. 19. † Mod. Trav. India, part viii. p. 308.

‡ Lane's Manners and Customs of the Modern Egyptians, vol. ii. p. 310; vol. i. pp. 31, 32. Denon's Trav. in Egypt, vol. i. p. 266. Sonnini, vol. iii. pp. 67, 203.

sent, according to the opinion of the learned, bear the closest resemblance to the ancient Egyptians, as represented in their paintings, are the Nubeh, Barabras, or Berberins of the Upper Nile.* They offer also indications of mixture with other tribes, but some tribes are of a red or copper-color, varying to a darker tint, with thick lips, a scanty beard,† and hair bushy and strong, but not woolly. Few questions have been discussed with more learning and ingenuity than the physical character of the ancient Egyptians. The result of these investigations has established, that at least one of the varieties of physiognomy expressed in the paintings and sculptures presents several of the characteristics of the Red race. It is clear that their artists endeavored to represent the complexion and features in the most faithful and accurate manner.‡ In the figures upon the monuments, the forehead is rather low, the eyes are drawn in an oblique direction, (which is more remarkable in the paintings than in the sculptures,) the lips are somewhat thick, the cheek bones rather high, the hair black, short, and bushy, and the complexion of a red copper, or light chocolate-color. "This red color," says Mr. Pritchard, "is evidently intended to represent the complexion of the people, and is not put on in the want of a lighter paint or flesh-color, for when the limbs or bodies are represented as seen through a thin veil, the tint used resembles the complexion of Europeans. The same shade

* Lane, *ibid.* Pritchard's *Eastern Origin of the Celtic Nations*, p. 190.

† Burckhardt's *Travels in Nubia*, p. 110. Pritchard's *Phys. Res.* vol. ii. p. 172.

‡ Heeren's *Res.*, vol. ii. p. 90.

might have been generally adopted, if a darker one had not been preferred as more truly representing the natural complexion of the Egyptian race." A peculiarity of most of these figures is the absence of the beard in the native races, while a beard generally attends all the representations of Asiatics.* This might be attributed to the custom of the Egyptians, who, according to Herodotus, shaved every part of their bodies, but it must be acknowledged that the race possessed a thin beard, and it is singular that when upon the sculptures that feature is represented, it does not appear in the long and easy flow of nature, but, united in one mass, adheres to the chin in such an artificial form that it has been conjectured that the ancient Egyptians wore the beard in a case: in this shape it was appropriated to the statues of the kings and gods, Osiris and Horus, and appears to have been used only as the symbol of manhood. Rosellini remarked that the same head on the same monument is sometimes represented with the artificial beard, and sometimes without it, and that it was probably not worn, but merely intended to denote the male character.† Of the mummies the males have the head and beard shaved, and the hair of the females was long and black. On the Nubian monuments we also find males represented as beardless, or with the beard shaven, or with a narrow beard under the chin as it is now worn by the men in Nubia.‡ From these circumstances, it may be presumed that the Egyptians like the modern Copts and Nubians had but little beard. In their color, in the pecu-

* Wilkinson, vol. i. p. 297; vol. ii. p. 362.

† Library Ent. Know., Egypt. Antiq., vol. ii. p. 82.

‡ Burckhardt, pp. 99, 110.

liar character of the eyes, in the black hair and scanty beard, we recognise the features of the Red race. In speaking of the figures painted upon the walls of a tomb at Thebes, Sir Frederick Henniker says, "In these unfinished figures, the sweetness of the face, and the extraordinary length and beauty of the eye rivet attention." "At Munich I saw two young Brazilians (Indians), whose eyes are similar to these in the tomb. These children were lately brought from the river of the Amazons by Professor Martius."* It may be added that in one case a people with very prominent noses, and looking like those on the Mexican pictures and monuments, are represented on the Egyptian.†

Some osteological evidence tends also to sanction this division of the human race into three varieties. The methods of considering the human head, its shape and volume, have been various, but in two, which were originated by the most distinguished naturalists, there is a correspondence, which is the more singular from the discrepancy of their views with regard to the number of the races. By the vertical method of Blumenbach, who divided mankind into five races, but three great varieties exist in the conformation of the head, indicative of the three races. I. The Caucasian. II. The Mongolian, and III. The Ethiopian.

* Henniker, p. 126.

† Wilkinson, vol. i. pp. 370, 378.—"This relic with a great variety of uncouth and frightful stone images of porphyry, were found buried beneath the great square, consisting of idol gods and goddesses, serpents and other brute creatures of their superstitious veneration and worship. Among the collection I observed a large head cut in granite, the very fac simile of those I have seen in Egypt, and but for its locality and place of discovery, I should have supposed it had been dug from the ruins of Thebes."—*Fodor's Travels in Mexico.*

By the method of general comparison, pursued by Dr. Pritchard who divides men into seven varieties or classes, but three leading divisions are indicated by the form of the skull. I. The symmetrical, or oval form. (The Caucasian.) II. The prognathous, or narrow and elongated skull. (The Ethiopian.) III. The pyramidal, or broad and square-faced skull. (The Mongolian.)*

That these varieties of mankind are not of recent origin, and the result of climate and other causes operating upon the human constitution, but that they are of such antiquity as to be justly entitled to the appellation of primitive, must appear by reference to all the descriptions, monumental or historical, that have been handed down to us. The distinction of the races seems to be coeval not only with the earliest traditions, but with the

* Dr. Pritchard has designated the first and third of these varieties (the Caucasian and Mongolian) by the terms Iranian and Turanian. Iran, from the most ancient times, has been the name by which the native Persians have designated their country, and describes that territory which lies south and west of the Oxus, and between Arabia and India, Tartary and the Indian ocean; while Turan or Touran is a general appellation for the countries beyond the Oxus.—*Malcolm's Hist. Persia*, vol. i. p. 2, note. According to one of the early traditions, they were so called after Toor and Erij, two of the sons of Feridoon a Persian prince, to whom Tartary and Persia were respectively assigned upon the death of their father. The Persian historians, says Drummond, lay claims to the high antiquity of their monarchy, which, according to their account, extended over all Asia, with the exception of India. They divided Asia into three parts, Iran, Turan and Magrab. Turan included Tartary, China and Thibet; Iran, Persia; and Magrab, the countries to the west of Persia.—*Drummond's Origines*, vol. i. p. 298.

most ancient representations upon the architectural remains of the world, and with the earliest physical descriptions. The apparent inaccuracies and contradictions which arose among ancient authors in the physical description of different nations, originated in some cases from migrations, and the consequent transferring of names from one nation to another, as they occupied regions which still continued to be denominated by the name of the tribes they succeeded. Having reference to this confusion of nomenclature, and to the inaccurate descriptions by the Greeks of the physical characters of the Egyptians, there is no difficulty in referring the triple division of mankind, laid down by Aristotle, to the three races, the White, Black, and Red. "Aristotle," says Mr. Wiseman, "appears to have recorded the classification prevalent in earlier and in his own times, when he tells us that the older physiognomists decided of a person's character by the resemblance of his features to those nations who differ in appearance and manners, as the Egyptians, Thracians, and Scythians."* The same learned author has satisfactorily proved by collating this with other passages from Aristotle, that when he here speaks of the Egyptians he intended to signify the Negro or Black race, that by the Scythians he proposed to describe the fair or white-complexioned Germans of that name, and by the Thracians, the Mongol, or Red race. And this inference is sustained by a "passage in Julius Firmicus, overlooked by the commentators of Aristotle, which gives us the same ternary division, with the colors of each race. 'In the first place,' he writes, 'speaking of the characters and

* Wiseman's Lectures on the Connection between Science and Revealed Religion, p. 95, and authorities there cited.

colors of men, they agree in saying: if by the mixed influence of the stars, the characters and complexions of men are distributed, and if the course of the heavenly bodies, by a certain kind of artful painting, form the lineaments of mortal bodies; that is, if the Moon makes men white, Mars red, and Saturn black, how comes it that in Ethiopia all are born *black*, in Germany *white*, and in Thrace *red*.'”*

In one of the tombs at Beban el Malek, near Thebes, is represented the clearest evidence of the existence of the three races, at a period probably not less than fifteen hundred years before our era. It consists of the celebrated procession of four different nations, in groups of four, painted *red*, *white*, *black*, and then white. The first four belong to the white race, as appears from the beard, mustaches, complexion, and profile. The second are beyond question four negroes. The third are similar in color to the first, with a different costume, and have a dense brown beard; from their peculiar physiognomy they are supposed to have been intended for Jews. The last four are *red men*; “their black hair plaited from the crown, hangs regularly all round the head; it is cut short immediately over the eyebrows, and hangs down behind the ears into the neck. They have a small piece of black beard stuck to the point of their chin, but no mustaches,” a style of wearing the beard like that of the modern Nubians, who have a scanty beard.

There is no period, however remote, in which we do not find some allusion either mythological, monumental, or historical, to the physical differences in the human appearance, and to their ternary division. In the mythological traditions of nations,

* Wiseman, p. 100.

we might anticipate the discovery of the most ancient references to this subject. And perhaps the most striking instance of this kind is afforded in those of the ancient and civilized people of America. In a continent where, so far as researches have extended, there is no indication of the existence of any other than the Red race before the discovery, we nevertheless perceive a knowledge of the two other races; not, however, as derived from the actual presence of these races as inhabiting this country, but as the physical description of their gods. Thus Quetzalcoatl, the Mexican deity, the Payzome of Brazil, Viracocha the Peruvian god, are all represented as white men, with a long and flowing beard, and among the Muyscas of South America, Bochica, the prototype of Quetzalcoatl, is described in a similar manner. Tezcatlipoca, another of the Mexican gods, is described as black, and his principal image was of a black shining stone. The same deity probably was known and worshipped among neighboring tribes, by the name of Ixtlilton, or "The Black."*

In Hindoostan the ancient mythology presents equally curious physical characteristics as peculiar to the three great deities. Brahma, the most ancient of these, is represented as a *red* man, Vishnu as *black*, and Siva *white*. In Egypt, where the religious system was so closely assimilated to that of the Hindoos, Osiris, Typhon, and Horus, were respectively distinguished as *black*, *red*, and *white*.† In the mythology of the

* Voyage Pittoresque dans la Province D'Yucatan, par Frederick de Waldeck, pp. 6, 18. Clavigero, vol. i. p. 244.

† Paterson, in *As. Res.* Pritchard's *Egypt. Mythology*, p. 285, on the authority of Plutarch.

Greeks and Romans, we are told that Saturn divided the earth between his three sons, and Herodotus relates that Targiteus, the first king of Scythia, made a similar division of that country among his three sons.*

It is true, that these physical descriptions and fables are directly connected with the religious superstitions of these widely separated nations, but such is the case with all the primitive pagan histories of the world; for in early epochs, religion and history were closely interwoven, and blended together. In all mythologies a recondite meaning has been existent, and when we step beyond the precincts of sacred authority, we must expect to find the real events of history, as well as truths in natural philosophy and science, shrouded under theological mysteries, and engrafted upon religious systems. The Greeks, with their usual refinement, speculated metaphysically upon these ancient myths, and hence, perhaps, originated the divine triad of Plato. But it is wiser to refer this triple division to an historical fact than to a subtle idea of religious belief; particularly, as we find no ground for its existence at that early period, in the sacred writings, which, however, refer to the *three* sons of Noah as the original progenitors of the human race after the flood.

The Triune vessel found in one of the Ohio mounds perhaps indicates the same fact, which is corroborated also by the singular circumstance that among the various groups of earthen mounds in the United States, it is observed that three are generally of a greater size than the others, and stand in the most prominent places.† The same remark applies to the pyramids of Egypt—at least to those of Djizeh, Dashour, Abousir, and Gheeza.

* Herod., vol. ii. p. 306.

† Arch. Am., vol. i. p. 249.

Dr. Pritchard remarks, that the black-haired variety forms the most numerous class of mankind, and that it may be looked upon as the natural and original complexion of the human species.* "If we admit," says Dr. Lawrence, "the Caucasian to have been the primitive form of man, are we to suppose that the skin was rosy, the hair yellow or red, and the eyes blue, or that the former had a tendency to brown, and that both the latter were dark? We can have little hesitation in adopting the latter opinion; for those characters belong to all of this race except the Germans, which have occupied the more distant regions."† In adducing a few curious facts on this point, it will be perceived that while they afford room for speculation only, as to the original color of the human race, they tend directly to confirm the great antiquity of the Red race.

"The Indians," observes Mr. Adair, "are of a copper or red clay-color, and they delight in every thing which they imagine may promote and increase it. Accordingly they paint their faces with vermilion, as the best and most beautiful ingredient. If we consider the common laws of nature and Providence, we shall not be surprised at this custom—for every thing loves best its own likeness and place in the creation, and is disposed to ridicule its opposite."‡ Not only do the American warriors paint themselves with this color, but in some sepulchres in South America, even the bones of the skeletons have been dyed of the same hue. It may be remembered that some of the monuments of Central America were painted red, a circumstance, by no means of any importance, were it an isolated instance, but rendered interesting by similar appearances else-

* Prit. Phys. Res., vol. i. p. 220.

† Lectures, p. 358.

‡ Hist. N. Am. Ind., p. 1.

where. It is singular also, that among some of the tribes of our western Indians, we should find a tradition that they were formed by the Creator from the steatite, a species of red clay abounding in that region. Passing to the eastward it is observed, that the Polynesian Areois dyed their faces scarlet,* in their religious ceremonies,—and in one of the Polynesian traditions it is related that man was created of red earth—*araea*.† Sculpture and monumental painting is one of the most ancient of arts, as appears from some of the oldest structures in the world. The exterior of the Indian pagodas are sometimes painted red,‡ traces of the same color are perceptible on the surface of the sphynx before the pyramid of Cheops, and other Egyptian sculptures.§ The Egyptians, it has been already remarked, are depicted on the walls of their tombs as of a red color; we trace the same human complexion in the Etrurian tombs and Hindoo caves, and we read also of vermilion men painted upon the walls of the Babylonian temples.||

There are other circumstances illustrating the sanctity of this color. Red or scarlet it is well known was a royal color and called *Phoinic*.¶ Hence, the palm-tree, whose fruit was of the same tint, was the emblem of honor, and the reward of victory. To this and to its sacred use Pliny alludes when he says, “Verrius allegeth and rehearseth many authors, whose credit ought not to be disproved, who affirm that the manner

* Ellis's Polynesian Res., p. 180.

† Ibid. vol. i. p. 95.

‡ Heeren's Res., vol. iii. p. 77.

§ Clarke's Travels, vol. iii. p. 97.

|| Ezekiel 23: 11; 8: 10.

¶ Iliad, v. 454. Gellius, l. ii. c. 26, and the Scholiast, all quoted by Bryant, Myth., vol. ii. p. 9.

was in times past to paint the face of Jupiter's image upon high and festival days with vermilion ; as also that the valiant captains who rode triumphant into Rome had in former times their bodies covered all over therewith ; after which manner noble Camillus, they say, entered the city in triumph. And even at this day, according to that ancient and religious custom, ordinary it is to color all the unguents that are used at festival suppers at a high and solemn triumph with vermilion. And no one thing do the Censors give charge and order to be done at their entrance into office before the painting of Jupiter's visage with Minium. The cause and motive that should induce our ancestors to this ceremony I marvel much at, and cannot tell what it should be."*

To this may be added the testimony of Josephus, that Adam in the Hebrew signifies one that is red, because he was formed out of red earth.† The evidence that similar opinions prevailed in the Hebrew traditions is exceedingly curious, and none

* Pliny, Nat. Hist., 33, 7. old trans.

It appears that a German of great learning has made a similar ternary division of the races, not founded upon physical grounds, but upon moral and historical circumstances which he considers as affording strong lines of distinction.

1. The Caucasian race, which is known in most of its branches through an unbroken series of history, and by many varieties of civilization.

2. The Mongol race, which has a less authentic history, and only one kind of limited civilization ; and

3. The Ethiopic race, which has extremely little history, and seems to have retrograded in civilization.—*Universal History* of Christoph Schlosser, vol. i. sec. 2. div. 1, cited in Westminster Rev., vol. i. p. 94.

† Joseph. Antiq., p. 29.

more so than the allegorical description of the three races, and the account of the physical appearance of Noah contained in the Apocryphal Book of Enoch—a work probably written a short time before the Christian era.* We see here most clearly that some at least of the Jews entertained a belief in the very ancient differences of color, which characterize the races.

* The Book of Enoch the Prophet, translated from an Ethiopic MS. in the Bodleian Library, by Richard Lawrence, Archbishop of Cashel. Oxford, 1833. pp. 112, 116, 161. Ch. 84, sec. 17, v. 2. "And behold a cow sprang from the earth; v. 3. And this cow was white. v. 4. Afterwards a female heifer sprung forth, and with it another heifer; one of them was black, and one was red," &c., et seq.

Ch. 88, v. 1. "Then one of these four went to the white cows, and taught them a mystery. While the cow was trembling, it was born, and became a man, and fabricated for himself a large ship. In this he dwelt, and three cows dwelt with him in that ship, which covered them. (The deluge and its subsidence are then described, and then the allegory proceeds.) v. 9. Again I looked, in the vision, until those cataracts from that lofty roof were removed, and the fountains of the earth became equalized, while other depths were opened. v. 10. Into which the water began to descend until the dry ground appeared. v. 11. The ship remained on the earth; the darkness receded; and it became light. v. 12. Then the white cow which became a man went out of the ship, and the three cows with him. v. 13. *One of the three cows was white, resembling that cow, one of them was red as blood, and one of them was black; and the white cow left them.*"

In the same book, ch. 105, Noah is described at his birth "as a child the flesh of which was white as snow, and red as a rose; the hair of whose head was white like wool and long, and whose eyes were bright and beautiful;" as "a son *unlike* to other children;" as '*of a different nature from ours (theirs), being altogether unlike to us,*' who resembled "*not his father Lamech.*"

It is to be remarked that in these traditions, and indeed in those of all ancient nations, there are undoubted evidences that by the concurrent belief of mankind all men were children of the same first parents. Tradition and history, sacred and profane, unite in asserting this, and yet from the same testimony we are forced to admit the existence of the three races, separated by the same broad lines of distinction that they now are, in the earliest postdiluvian ages. Science, while it has by close observation, and a rigid system of induction, confuted the once general idea that these varieties have been produced by climate and similar causes, has at the same time by analogical testimony rendered it probable, if not demonstrated, that the *production* of varieties is not a phenomenon unknown in the physical history of man; and thus the unity of the human race is reconciled with its ancient ternary division. It is the province of true wisdom not to strive to penetrate beyond, or to inquire as to the final cause of this division. Our duties are to be learned from things as they exist, and not from speculation. In proving the common origin and the relationship of all men, though now existing in three races, tradition and physiology act in harmony; by acknowledging this relationship, the most severe and lofty code of morals, and the most benign philanthropy are satisfied; for by this result, the social, moral, and political rights of every branch of the same great family are placed upon an incontrovertible equality, and the most degraded members of the human race have claims upon our sympathy.

It appears from the preceding investigation that the Red race may be traced, by physical analogies, into Siberia, China, Japan, Polynesia, Indo-China, the Malayan islands, Hindoo-

stan, Madagascar,* Egypt, and Etruria. In some of these countries the pure type of the race may be perceived existing at present, in others many of its characters have been changed and modified, apparently by intermarriage, and in others its ancient existence is to be discovered only by the records preserved on their monuments. In these directions, then, are we to search for further analogies, and it may be found that physiology is by no means a fallacious guide in the elucidation of ancient history.

* The physical description of the tribes in Madagascar was accidentally omitted in the preceding chapter. The inhabitants of this island consist of two classes. The one is distinguished by a light person, straight black hair, weak and scanty beard, which they pluck out like the American aborigines, and by an olive or copper-colored complexion. The members of the other class are more robust and dark-colored—sometimes black—with woolly hair. The first race resembles the Malays and Polynesians; the latter approach to the Negro. These races have intermingled. The olive-colored tribes are not the aborigines of the country, and there seems to be good foundation for the opinion that their ancestors were a colony from Java.—*Ellis's Hist. Madagascar*, vol. i. pp. 115, 133, 122; vol. ii. p. 4.

CHAPTER VII.

ORIGIN OF THE ABORIGINES. LANGUAGE.

THE mutual diversities of the American languages, heretofore so much exaggerated, and the few signs of affinity they exhibit to those of the other continent, have been often urged as decisive of their indigenous origin. And in one sense these diversities clearly are indigenous, that is, they present undoubted indications of having been originated since the migration of the race into America. Perhaps the highest proof of the original relationship of languages consists in the resemblance of their grammatical structure. Abandoning the old system of endeavoring to establish affinities by the identity of words, a defective criterion when employed alone, and one which was often limited only by the fancy and ingenuity of the inquirer, philologists have examined into the form and character of the American languages, and have established satisfactorily that they have all sprung from one common source. The features of resemblance are such as enter into their elementary construction; the diversities, those to which all languages are exposed by the separation and dispersion of those who speak them. When the ancient progenitors of the aborigines reached our shores, they found a vast uninhabited continent expanded before them. The immediate and rapid distribution of population which must have ensued, the separation into distinct tribes and communities, each remaining isolated for a long series of ages, the

change in mode of life, and the decline of civilization, must soon have effected a radical alteration in the words of an oral language, and effaced every sign of verbal identity. If the chief evidence of the common origin of the American languages exists in their construction, we might, with great certainty, anticipate the absolute loss of every trace of verbal affinity with any of the dialects of the other hemisphere. Accordingly none of the efforts to discover the origin of the Americans has proved more unsuccessful, than those which have been based upon an examination of their languages. The scanty analogies which have been perceived, however, point towards Asia. Thus, in eighty-three American languages, one hundred and seventy words have been found, with similar roots, a great majority of which are related to similar words in the Tongoo, Mantchoo, Mongol, Samoid, Ostiac and other Siberian idioms. Other points of resemblance have been traced between the Indian languages, and the Coptic, Basque, and Polynesian. The Aztec is said to possess a small number of affinities with the Chinese and Japanese; Tonquin words have been found in the Maya tongue; and the Otomite is thought to present some similitude to the Chinese. Another peculiarity which appears to be common to the Oriental dialects of Asia and some of our aboriginal languages, is the existence of a court-language—a modification of speech differing from the ordinary idiom. Thus the Mexicans, Natchez, and Creeks, and other nations used a language of honor in addressing their chiefs and princes, and the same has been observed in China, among the Malays,* and in Java and Siam. Of this language of ceremony, Clavigero

* Marsden's Sumatra, p. 102.

says, "The style of address in Mexican varies according to the rank of the persons, with whom, or about whom, conversation is held, adding to the nouns, verbs, prepositions and adverbs certain particles expressive of respect."* "In addition to these simple pronouns," says Dr. Leyden, in a passage quoted by Dr. Lang, "there are various others which indicate rank and situation, *as in Malayu, Chinese, and the monosyllabic languages in general, which have all of them paid peculiar attention to the language of ceremony, in addressing superiors, inferiors and equals.*" It is perhaps somewhat more than an accidental coincidence that the Mexican particle *tsin* which was usually added to the names of their kings, is identical with the Chinese *tsin*, and the Indo-Chinese *asyang*, an affix signifying *Lord*.†

The great obstacle interposed against a full understanding of the real affinities, which exist between the American and other languages, has been the method of investigation. The learning of Europe and America has been exhausted to little purpose in tracing verbal analogies; and if research were directed towards the comparison of structure and grammatical forms, the result would doubtless be more satisfactory. The American languages are distinguished by their long polysyllabic terms, and by their complicated system of inflection. But these terms do not appear to have been originally single words, but rather to be compounded. It has been found, says Mr. Schoolcraft, speaking of the words of the Algonquins, that those of the highest antiquity are simple and brief. "Most of

* History of Mexico, vol. i. p. 393.

† Hum. Res., vol. ii. p. 223. Dr. Lang's View of the Polynesian Nations, p. 144.

the primitive nouns are monosyllabic, and denote but a single object or idea. A less number are dissyllabic; few exceed this; and it may be questioned from the present state of the examination, whether there is a single primitive trisyllable. The primitives become polysyllabic by adding an inflection indicating the presence or absence of vitality, (which is the *succedaneum* for gender,) and a further inflection to denote number. They also admit of adjective terminations. Pronouns are denoted by particles prefixed or suffixed. The genius of the language is accumulative, and tends rather to add syllables or letters making further distinctions in objects already before the mind, than to introduce new words. A simple word is thus oftentimes converted into a descriptive phrase, at once formidable to the eye and the ear; and it is only by dissecting such compounds that the radix can be attained." From these facts it may be presumed there was a period when the languages were less cumbersome and complex than at present, and perhaps of a monosyllabic character. The same remark applies to the Polynesian languages, which, upon being analyzed, appear to possess a monosyllabic radical basis.

And hence it may be interesting to examine briefly some affinities in the mechanism of the American and Polynesian languages. In the American there is a universal tendency to express in the same word, both the action and the object. In the Polynesian, "verbs not only express the action, but the manner of it distinctly, hence to send a message would be *orero*, to send a messenger *kono*."* In the American, the use of the verb *to be* as an auxiliary was unknown, and its place was sup-

* Tour through Hawaii, by Rev. Wm. Ellis, p. 474.

plied by an intransitive verb, or by an inflection or particle. In the Polynesian, says Mr. Ellis, "the greatest imperfections we have discovered occur in the degrees of the adjectives, and the deficiency of the auxiliary verb *to be*, which is implied, but not expressed. The natives cannot say I am, or it is, yet they can say a thing remains (as, *the canoe remains there*); and their verbs are used in their participial form by simply adding the termination *ana*, equivalent to *ing* in English." In the language of Chile,* in the Cherokee and other northern languages, besides a singular and plural there is a dual number of the pronouns; in the Polynesian, there is not only a singular, plural, and dual, but a double dual and plural. In both groups of languages the degrees of comparison are expressed by distinct words. The inflections of person and number, connected with the verb, are the inflections of the pronoun and not of the verb,† nouns and adjectives are readily converted into verbs, and verbs into nouns and adjectives, by the addition or suppression of particles; and indeed the general principles of their structure and formation seem to identify these languages by many close and striking analogies.

Mr. Marsden was originally of opinion, that the languages prevailing on the western coast of South America, had not "even the most remote affinity to the Polynesian;" and he extended this remark also to those of the aboriginal nations in North America.‡ At a subsequent period, however, he appears to

* Arte de la Lengua General del Reyno de Chile, etc., por el P. Andres Febres, 1764, p. 11.

† Gallatin, in Arch. Am., vol. ii. p. 196. Ellis, *ibid*.

‡ Miscell. Works, p. 61. Hist. Madagascar, by Rev. Wm. Ellis, vol. i. p. 493. Tour through Hawaii, p. 471.

have been shaken in his confidence on this point, by Mr. Ellis, who had observed that some of the words in South America were of a Polynesian character. Dr. Lang has added to the number of their verbal affinities, and by indicating at the same time some points of resemblance between the Chinese and Polynesian languages in their construction, has tended to supply the necessary link of connection with Asia.

CHAPTER VIII.

ORIGIN OF THE ABORIGINES. ASTRONOMY.

THE civil year of the Mexicans consisted of eighteen months of twenty days, and by the addition of five intercalary days, which were called void or waste days—Nemontemi—contained three hundred and sixty-five days. Four weeks of five days each made a month*—eighteen months a year—thirteen solar years a small cycle—four of these cycles formed a “great year”†—and two of these “an old age” of one hundred and four years.

The civil day, like that of the Egyptians and most of the Asiatic nations, commenced at sunrise, and like the Hindoo day was divided into eight intervals or periods, four of which were indicated by the rising and setting of the sun, and his positions in the Nadir and Zenith. The cycles of fifty-two years were numbered by numerical signs. To distinguish particular years in this cycle, they adopted the following method, used also in Thibet, Indostan, China,‡ Japan, and Mongolia. They selected four of the signs of the days, which were Tochtlī—rabbit or

* The first day of each week was market-day.

† Toxiuhmolpīa—the tying of the years.

‡ This periodical series is of great antiquity in China, being mentioned in the Chou-King, an historical work bearing the date of B. C. 2300. It was formed by a combination of the signs of the ten elements with the twelve signs of the zodiac.

hare; Acatl—a cane; Tecpatl—a flint or knife; and Calli, a house, and combined them successively with the numerical signs from one to thirteen. Thus Tochtli was joined to the signs of the numbers, one, five, nine, and thirteen, to signify the first, fifth, ninth, and thirteenth years of the small cycle of thirteen years; Acatl was joined to the signs of the numbers two, six, ten, and one, to signify the second, sixth, and tenth years of the first cycle of thirteen years, and the first year of the second cycle; and by continuing the series of combinations through all the four smaller cycles composing the great age of fifty-two years, no sign was repeated twice with the same number, and every year of the fifty-two was expressed by a different combination.*

The ancient Yucatan calendar was similar to that of the Toltecs and Aztecs, and the year was divided into eighteen months of twenty days. The year, however, it is thought, commenced on the twelfth of January, and the five void days which were added fell at the end of the month Vaycab, or just after the summer solstice.† Five Maya years constituted a lesser age, and four of these made a great age of twenty years. These

* "The most ancient division of the zodiac is that into four parts. The four signs of the equinoxes, and the solstices, chosen from a series of twenty signs, the number of days in the Mexican month, recall to mind the four royal stars, Aldebaran, Regulus, Arcturus and Fomalhaut, celebrated in all Asia, and presiding over the seasons. In the new continent, the indications of the cycle of fifty-two years, formed, as we would say, the four seasons of the grand year; and the Mexican astrologers were pleased to see, presiding over each period of thirteen years, one of the four equinoctial or solstitial signs."—*Albategnius de Scientia Stellarum*, c. 2, p. 3, cited by Nuttall.

† Waldeck, p. 22.

four ages or periods of five years, took their names from the cardinal points, viz., 1, East, Cach-haab; 2, West, Hix; 3, South, Cavac; and 4, North, Muluc. The entire age of twenty years was called Katun, and a record of these eras, as they passed, was preserved by sculpturing their hieroglyphic symbols upon square tablets of stone, placed one above another in the walls of their edifices.

Among the Muyscas, the day was divided into four parts—three days made a week, and ten weeks, a lunation or month, called Suna, which commenced the day after the full moon. The rural year was composed of twelve Sunas, and at the end of the third year, another month was added, a method similar to one used in the north of India and in China.* The civil, or vulgar year called Zocam, consisted of twenty Sunas;† and the Ritual, or Sacred year of thirty-seven Sunas. Five ritual years made a small cycle, and four of these small cycles a great age of twenty sacred years, equal to a real solar cycle of sixty years, an astronomical period of the same duration as one used in Oriental Asia.‡ The Muyscas engraved calendar stones, whereon the years, and months, and days were denoted. In recording time, and distinguishing the days, months, and years, they adopted a system of periodical series, similar in principle to that employed in Mexico. The ten num-

* Hist. China, by J. F. Davis, vol. i. p. 282.

† In the accounts given to us of the calendar of the Muyscas, there appears to be some confusion in relation to the rural and civil years; particularly as the Zocam, according to tradition, began at the full moon succeeding the winter solstice, a circumstance which is clearly impossible in a year of 600 days.

‡ Hist. China, by J. F. Davis, *ibid.*

bers, indicated by hieroglyphic figures, (and which it has been supposed, mark an original division of the zodiac into ten signs,) arranged in three series, represented the thirty days of a lunation; and by the extension of the same method to their religious cycle, the first month of the first year was denoted by Ata, or the hieroglyphic for the number one, the first month of the second year by Mica, or the hieroglyphic for number three, and so on through the whole cycle.*

The Peruvian year *huata*, from *huatuni*, to tie,† was divided into twelve months, called Quilla, from the moon, which were strictly lunar. The months were divided into light and dark halves, which were subdivided again into weeks of seven days, according to Vega. They observed the return of the solstices and equinoxes, by means of towers or gnomons, and yet Garcilasso de la Vega says, they failed to adjust the lunar to the solar year.‡ The meager accounts which have been transmitted in relation to the Peruvian astronomy, induce a suspicion that the Spaniards were but imperfectly informed as to their cycles and methods of calculation. Acosta denies that either the Mexicans or Peruvians had weeks of seven days, and says that the year anciently commenced on the first of January, and was altered to the winter solstice by the Inca Pachacutec. It is possible that a clue to the real division of time, or to the construction of one of their calendars is afforded in the eighteen niches which continually recur in most of the monuments, and which may have indicated a division into eighteen months, like the Mexican year.

* Hum. Res., vol ii. pp. 105, 108, 123, 135, etc.

† Vocabulario de la Lengua Quichua, p. 180.

‡ Vega, vol. i. pp. 106, 108.

The division of the year among the ruder Indian tribes was lunar. The Araucanians commenced it at the winter solstice, their calendar was divided into twelve months of thirty days, and at the end of the year five complementary days were added!*

The months were called *cuyen*, from a word signifying moon, and the year *thipantu*—the course of the sun.† The remaining nations reckoned the months by the moons, some calculating twelve, and others thirteen to the year.‡ Traces of a calendar resembling the Mexican, it is said, have been found among the tribes on Nootka sound, along the north-west coast.

In those primitive ages to which we must revert for the origin of all the ancient astronomical systems, the first division of the heavens was probably taken from the course of the moon, as the most conspicuous object when the stars were visible, and from the arc of the circle traversed each night by that body, as indicated by the most remarkable constellations. The lunar zodiac formed part of a very ancient system of Arabian astronomy. "As in the solar zodiac, the sun was observed from month to month to pass from one house or sign to another, so the moon also was said to change her mansions every night."§

From a similar source have originated the Nacshatras, or houses of the moon, in the Hindoo, Chinese and other Oriental calendars, which were twenty-seven or twenty-eight in number; and also, the signs of the days among the Mexicans. It is true, the Mexican month of twenty days does not correspond with the lunar month, nor with any other particular astronomical period; and it is not easy to imagine why months of such a

* Molina, vol. ii. p. 85.

† Febres, pp. 82, 645.

‡ Charlevoix, vol. ii. p. 173. Loskiel, p. 31.

§ Landseer's Sabæan Res., p. 74.

duration were adopted in their calendar, except that thereby a convenient multiple was afforded, so that at certain times the civil and ritual calendar should coincide. The civil months were clearly of arbitrary duration, as likewise was the ritual year. The Mexican ritual year consisted of twenty months of thirteen days each, or of two hundred and sixty days in the aggregate.* These months of thirteen days do not correspond exactly with any astronomical period, but they have been adopted originally, as a measure of the time during which the moon was visible, after having emerged from the rays of the sun, up to the termination of its second quarter,—while an equal period elapsed from the full of the moon to its subsequent immersion†—allowing two days, during which its actual rising, with reference to the stars, may not easily have been observed. Hence we perceive that the most ancient calendar, the ritual or religious, was lunar, and its months represented half lunations. The Hindoos also divided their month into light and dark halves, and the same peculiarity may be observed in the Roman calendar, derived from the Etrurian,—the term *Ides* being derived from *iduate*, to divide.

* Clavigero, vol. i. p. 295. Hum. Res., vol. i. p. 281.

† “The ancient Sabæans,” says Mr. Landseer, “do not appear to have possessed artificial spheres whereby to ascertain and manifest the actual rising of a combust star, that is to say, a star immersed in the rays of the sun.” “They must have waited until they actually saw any given star, before they announced and before they publicly celebrated its ascension.—*Sabæan Res.*, p. 177. “The ancients allowed twelve days for a star of the first magnitude to emerge from the solar rays, or, according to some, fourteen days.”—*Sir William Drummond's Memoir on the Zodiacs of Denderah*, etc., p. 100.

At the termination of the Mexican cycle of fifty-two years, the civil year always ended at the winter solstice, as did that of the Chinese* and Hindoos. At this time they allowed for the quarter of a day accumulating yearly, and intercalated thirteen days. It has, however, been asserted that the Mexicans made an intercalation of twenty-five days every one hundred and four years. The interruption such an intercalation would have given to the consecutive series of thirteen days, engrafted in their astronomical system, would tend to impart a doubt as to the correctness of this statement, and would render, a priori, the intercalation of twenty-six days every one hundred and four years, or of thirteen days every fifty-two years far more probable. But such an intercalation would be too much, and in ten cycles of one hundred and four years each, or in one thousand and forty years, the error would amount to nearly seven days. Now, according to Humboldt, in the Codex Borgianus of Veletri, ten such cycles, or one thousand and forty years, appear represented upon four successive pages, and at their termination, *seven days are in fact suppressed*. This intercalation of thirteen days every fifty-two years, and the suppression of seven days at the end of one thousand and forty years, indicate a calculation of the length of the year at about three hundred and sixty-five days five hours and fifty minutes, a degree of accuracy almost incredible.†

* This, it is said, was the case in the time of Yao, B. C. 2300. The commencement of the year among the ancients was various; by some it was placed at the winter, and by others at the summer solstice.

† The Chiapanese calendar contained the same divisions and periods as the Mexican, with the difference that the days were called

From the very earliest periods of the world, some of the constellations and the signs of the zodiac appear to have been represented by animals, and we discover the same system of symbols in America. The days of the Mexican month were distinguished by the following signs :

I.	Cipactli	.	.	.	A sea animal.*
II.	Ehècatl	.	.	.	Wind.
III.	Calli	.	.	.	House.
IV.	Cuetzpalin	.	.	.	Lizard.
V.	Coatl	.	.	.	Serpent.
VI.	Miquiztli	.	.	.	Death.
VII.	Mazatl	.	.	.	Stag.
VIII.	Tochtli	.	.	.	Rabbit.
IX.	Atl	.	.	.	Water.
X.	Itzcuintli	.	.	.	Dog.
XI.	Ozomatli	.	.	.	Ape.
XII.	Malinalli	.	.	.	A plant.
XIII.	Acatl	.	.	.	Reed.

after the names of Votan, and other illustrious men of their ancestors. They used also the same method of periodical series for computing time.

* This is the signification given by Humboldt, with whose opinion Betancourt and Clavigero agree: Boturini and Torquemada thought otherwise. The Mexicans had likewise a series of nine signs, which presided over the night; and the number has appeared so anomalous in their system, as to favor the opinion of its foreign origin. Several Asiatic nations have nine astrological signs, and the same number is sacred among the Mongols and their kindred races, the Chinese and the Siamese.—*Strahlenburgh*, p. 86. *Pallas*, vol. i. p. 198. *Crawford's Siam*, vol. ii. p. 104.

XIV.	Ocelotl	.	.	.	Tiger.
XV.	Quauhtli	.	.	.	Eagle.
XVI.	Cozcaquauhtli	.	.	.	A bird.
XVII.	Olin Tonatiuh	.	.	.	Motion of the Sun.
XVIII.	Tecpatl	.	.	.	Flint.
XIX.	Quiahuitl	.	.	.	Rain.
XX.	Xochitl	.	.	.	Flower.

To represent a month, these signs were painted in a wheel or circle. Four of these signs were selected, to designate, in combination with the signs of the numbers up to thirteen, the years of the century, as mentioned above, and of these four, Tochtli or Rabbit was the sign for the first year of their century, and this sign was considered most fortunate and propitious. Every year designated by the sign *rabbit* commenced with the day figured by Cipachtli, a sea animal. Clavigero says, the most solemn Mexican festivals were those of the *divine years*, of which kind were all those years which had the *rabbit* for their denominative character. In view of the intimate connection between astronomy and religion, the position of this sign, so as to lead the years, is evidence of its antiquity, and sacred character. And perhaps this circumstance may serve to explain the curious fact that the Delawares sacrificed to "a hare." Loskiel says it was because, "according to report, the first ancestor of the Indian tribes had that name."* Charlevoix gives the story more in detail; "almost all of the Algonquin nations," he says, "have given the name of the *Great Hare* to the First spirit; some call him *Michabou*, others *Atahocan*. The greatest part say, that being supported on the waters with all his

* Loskiel, p. 40.

court, all composed of four-footed creatures like himself, he formed the earth out of a grain of sand, taken from the bottom of the ocean; and created men of the dead bodies of animals. There are some also that speak of a *god of the waters*, who opposed the design of the great hare, or at least refused to favor it. This god is, according to some, *the great Tiger*; but it is to be observed there are no true tigers in Canada; therefore this tradition might probably be derived from some other country.”*

The illustrious Humboldt instituted a comparison between the Mexican symbols of the days, and the zodiacal signs employed in the astronomical systems of Eastern Asia. He found four of these, to correspond with four of the Hindoo Nacshatras, or Houses of the Moon. They were the Mexican *Calli* and the Hindoo *Magha*, represented by a house; the *Acatl* and *Venou*, by a cane; the *Tecpatl* and *Crittica*, by a flint or knife; and the *Olin*, or motion of the sun, denoted by the prints of three feet, and the *Sravanna*, or the three prints of the feet of Vishnoo.

Eight of these signs were also found to correspond exactly with an equal number of the signs of the Zodiac of the Thibetians, Chinese, and Mongols. They were *Atl*—water; *Cipactli*—a sea animal; *Ocelotl*—the tiger; *Tochtli*—the hare or rabbit; *Ozomatli*—the ape; *Itzcuintli*—the dog; *Coatl*—the serpent; and *Quauhtli*—a bird; all bearing the same names in those Asiatic zodiacs. In the Zodiac of Bianchini, a mutilated planisphere discovered at Rome in 1705, the same philosopher observed seven signs which belonged to the Tartar zodiac, three of which, the dog, the hare, and the ape belong also to the Aztec

* Voyage, vol. ii. p. 107.

zodiac.* In the Siamese zodiac we also find the signs of the tiger, the hare, the serpent, the ape, the dog, and the bird; and in that of Japan, the same signs are also observed.†

The Mexican sign Tecpatl, or flint, was represented by a lance or arrow-head; and the terms by which Sagittarius was known to the Arabians, Chaldeans, and Persians, all signify arrows.‡ The Muysca sign *Ala*, or water, was the first in their system, and the first Chinese asterism was *Tse*, or water. The Mexican *Alt*, a hieroglyphic zodiacal sign of the same signification, was represented by the same double line of undulation, under which Aquarius was figured by the ancients.§

The Mexican wheels, or circles, containing the series of hieroglyphics indicating a cycle of fifty-two years, were surrounded by a serpent with its tail in its mouth, and which pointed out, by four knots in its body, the cardinal points; the circumference was intersected by eight triangular radii. These circles, and the planispheres formed mostly on the same model, present striking analogies to the Egyptian, and especially to the Circular Zodiac of Denderah. In this the signs are arranged in a circle, the circumference of which is also divided into eight

* Hum. Res., vol. i. pp. 322, 337, 367.

“The portions of the duodenary cycle were indicated by the same animals as symbols, among the Iranians, Turanians and Chinese.”—*Drummond's Origines*, vol. i. p. 390; vol. ii. p. 169.

† Kempfer's Japan, in Pinkerton, vol. i. p. 722. Crawford's Siam, vol. ii. p. 19.

‡ Landseer's Sabæan Researches, pp. 147, 137.

§ Beltrami speaks of a calendar-stone at Tula, in Mexico, upon which were represented *Aquarius*, *the Twins*, and *the Virgin*?—*Beltrami. Le Mexique*, vol. ii. pp. 92, 145, 166.

sections; around winds a serpentine line, commencing with Leo and terminating with Cancer,* and about the whole is a hieroglyphic zone.†

In the centre of the Aztec calendar-stone, is an image of the Sun, resembling the Hindoo *Kronos*, with teeth displayed and a protruding tongue. Sir Wm. Drummond, in his Memoir on the Egyptian Zodiacs,‡ observes that it was known at a remote period, that the sun is in the centre of the planetary system, with the earth revolving round it; and the circular form of the Mexican planisphere, with the central position of the sun, suggests that the Mexicans were also acquainted with that fact. The Egyptians and Mexicans intercalated five days at the end of the year; their zodiacs originally commenced with the same sign, and the number of Mexican weeks of thirteen days in their great cycle of fifty-two years, is precisely equal to the number of years in the great Sothic period; the latter coincidence, however, may be accidental.§

Those who have contested the great antiquity of the Chinese and Hindoo astronomical calculations, have been to much labor in proving, that the astronomers of these nations were in the habit of making back calculations, until a period was attained when many of the celestial bodies were in conjunction. This opinion is of no more importance here than as showing, that those ancient people were acquainted with certain great as-

* Saulnier's Observations on the Circular Zodiac of Denderah.

† The Egyptians, in their astronomical representations, says Denon, bind or twine two serpents round a globe. *Travels in Egypt*, vol. i. p. 305.

‡ Origines, vol. ii. p. 203.

§ Hum. Res., vol. ii. p. 229.

tronomical periods or cycles, at the expiration of which, the stars, planets, sun, and moon returned to the same places in the heavens. This fact, in conjunction with the prevalent idea of the eternity of matter, probably gave rise to the exaggerated notions of the age of the earth, universal among these nations, and in combination with the tradition of the deluge, induced the belief of the Cataclysms, or that at the end of these great ages, a tremendous convulsion of nature took place. Thus Censorinus says, "But the year which Aristotle calls the greatest, rather than the great, is that in which the sun and moon, and all the planets complete their courses, and return to the same sign from which they originally started together. The winter of this year is the Cataclysm, which we call the deluge, but its summer is the Ecpyrosis, that is, the conflagration of the world: for at these alternate seasons, the world is burned and deluged."* The Egyptians preserved "in written records the memory of the event, that since the commencement of the Egyptian race, the stars have completed four revolutions, and the sun has twice set where he now rises."† We find Cataclysms in the traditions of the Celts, but in accordance with their system of Triads, there had been only three. The first was a deluge, in which all mankind, save two, were destroyed. The second, a conflagration which was destructive to the greatest part of the human race, and the third was a scorching summer, fatal alike to vegetation, animals, and men.‡ The Mexican and Acolhuan traditions borrowed from the Toltecs, stated

* Censorinus de Natali Die in Cory, p. 323. Seneca Nat. Quæst. cxi. 29.

† Pomponius Mela, in Cory's Ancient Fragments, p. 163.

‡ Welsh Archæology, vol. ii. p. 57.

that the world had undergone four periodical revolutions, after which the sun was created for the fifth time. The first age was terminated by a great famine—the second by fire—the third by tempests, and the fourth by a deluge.*

The Maya traditions described three ages, the last of which was terminated by an inundation;† at the end of their great cycles they went in religious processions to their sacred places and temples, probably to intercede with the gods against the return of these periodical calamities. The Peruvians appear to have had similar traditions, and they believed that the world would perish at the end of one of the ages;‡ processions and sacrifices, similar to those made by the Mexicans, were customary with the Muyscas at the end, or rather the opening of each great cycle, and they were probably based upon the same superstition.§ The Brahmins generally taught the same opinion, and four ages, terminated by precisely the same causes, are mentioned in some of the old Hindoo authorities. A tradition of a fifth age, like the Mexican, existed in Thibet.||

It was believed by the Mexicans upon the faith of a tradition, that the destruction of the world would again take place

* Hum. Res., vol. ii. p. 20. Clavigero says the fourth age had not yet terminated—vol. i. p. 289—and he changes the order of the ages. The Siamese also believe in the successive destructions and reproductions of the earth. *Crawford's Siam*, vol. ii. p. 66.

† Waldeck, pp. 37, 46.

‡ Lafitau, p. 229.

§ Pike mentions a tradition among some of the western Indians that the world would be destroyed by another deluge at some future period. *Expedition*, p. 78.

|| Asiatic Researches, vol. ii. p. 171. Hum. Res., vol. ii. pp. 16, 245.

at the end of a great cycle. The five intercalary days, which ended the last year of the age of fifty-two years, were spent in great mourning, in anticipation of this dreadful catastrophe. Then garments were rent, and all the domestic utensils destroyed as being of no further use, and on the fifth day, the sacred fires were extinguished in all the temples. On the evening of this, the last day, when the Pleiades had crossed the meridian, which was the indication that the dreaded calamity would not occur, the sacred fire was again kindled, and at this signal from the summits of the Teocalli, the land was filled with rejoicings. When, finally, the reappearance of the sun in the morning confirmed their safety, anxiety was at an end and mutual congratulations were exchanged. This remarkable custom finds its counterpart in Egypt. "When the Egyptians saw the sun descend from the Crab towards Capricorn, and the days gradually diminish, they were accustomed to sorrow from the apprehension that the sun was about to abandon them entirely. This epoch corresponded with the festival of Isis; but when the orb began to reappear, and the duration of the days grew longer, they robed themselves in white garments, and crowned themselves with flowers."*

The Goddess of the Syrians, according to Macrobius, was "feigned to lament when the sun, in his annual progress through the twelve signs of the zodiac, enters a part of the lower hemisphere. When the sun arrives in the lower signs, *and the days begin to shorten*, Venus is represented as lamenting him, as if he were snatched away by death, and detained by Proserpine." "Again they pretend that Adonis is restored to Venus when

* Achilles Tatius. See also Herod. Euter., 142, 4. Bucolics, v. 4.

the sun, having made his way through the six inferior signs, begins to traverse the regions of our upper hemisphere.”* Mr. Pritchard, in citing this passage, remarks, that the same customs prevailed in Egypt under different names, and quotes an extract from Plutarch to the effect, that “the common time for the solemnization of these festivals was within that month in which the Pleiades appear.”†

The Chinese, Hindoos and other primitive nations had a tradition of a time when the colure of the equinox intersected the constellation of the Pleiades. With the Arabs, their rising with the sun, anciently betokened the return of spring, and their setting, autumn.‡ They rose heliacally in the age of Taurus, and when the sun passed into Aries, they naturally still remained for many years the sign of the vernal season.§ In Greece, their heliacal rising was considered favorable to mariners, and indicated also the seasons to the husbandman.|| According to Censorinus,¶ some of the ancients began “the year

* The Indian Vishnoo slept through the winter months and rose in the spring. The priests of Adonis lamented his annual wound, when the sun, after the autumnal equinox, had descended to the lower hemisphere. *Drummond's Origines*, vol. ii. p. 414.

† Pritchard's *Egyptian Mythology*, p. 65.

‡ Landseer, pp. 323, 115.

§ “When Atlas-born, the Pleiad stars arise
Before the sun, above the dawning skies,
'Tis time to reap; and when they sink below
The morn-illumined west, 'tis time to sow.”

Hesiod. Trans.

|| Theoc., *Idyll* xiii. v. 25. Vide Herod., l. ii. c. 57.

¶ In Cory, p. 328. Pliny, lib. xviii. c. 25.

from the rising or setting of Vergilia" (Pleiades), and this constellation occupied an equally important position in the astronomical systems of Eastern Asia.* The Mexicans and other nations of Anahuac, as we have seen, marked the termination of their great cycles by these stars, and celebrated their passage over the meridian by rejoicings. The Peruvians appear to have regarded the same constellation with veneration,† and the Araucanians knew and named these stars.‡ The Tapuyas, the oldest race in Brazil, watched the rise of the Pleiades, and worshipped them with songs and dances.§ The Abipones, says Dobrizhoffer, think the Pleiades "to be the representation of their *grandfather*, and as that constellation disappears at certain periods from the sky of South America, upon such occasions, they suppose that their grandfather is sick, and are under a yearly apprehension that he is going to die; but as soon as those seven stars are again visible in the month of May, they welcome their grandfather as if returned and restored from sickness, with joyful shouts and the festive sound of pipes and trumpets."|| Intermediate America and Asia, the same stars were watched by the Polynesian islanders, and their rising (heliacal) divided the year of the Society islands into two seasons.¶

All the nations of the East, appear to have hailed with re-

* Hum. Res., vol. i. p. 387.

† Vega, vol. i. p. 106.

‡ Molina, vol. ii. p. 85.

§ Southey's Hist. Brazil, vol. i. p. 380. Dobrizhoffer, vol. ii. p. 94.

|| Ibid. vol. ii. p. 65.

¶ Polynesian Researches, vol. i. p. 79. The Javanese anciently regulated the season of sowing by the appearance of the Pleiades.—*Crawford's Ind. Archipelago*, vol. i. p. 300.

joicings the appearance of the first new moon of the year, or the first new moon after the vernal equinox. In the fourth Mexican month, which lasted from the ninth to the twenty-ninth of March, was celebrated the *Cohuailhuil*, or festival of the Snake. This was the season of the vernal equinox, and the festival was in honor of the goddess *Cihuacohuatl*, or the *woman serpent*. Now the moon was often anciently denoted by the figure of a dragon, which was a known emblem of light in its darting motion. Accordingly, even among the barbarous tribes of America, when eclipses occurred, they superstitiously believed that the sun was attacked by a great dragon or serpent, an idea probably derived from the figure of the animal by which the moon was usually represented.

In relation to the Egyptian legends, wherein it is said that the body of Osiris was cut into pieces by Typhon, Plutarch remarks, that "those who join with the physiological accounts, certain mathematical matters relative to astronomy, suppose Typhon to mean the orb of the sun, and Osiris that of the moon." So likewise in the Mexican mythology, we read of the woman serpent or the Moon, devoured by the Sun, a myth probably descriptive of the change in the phases of the moon. It thus appears probable that in the Mexican, as well as in the ancient astronomy, the serpent was one of the emblems of the moon; and as in Mexico, the woman serpent or moon, was styled "mother of our flesh," so in Egypt, that luminary was called "mother of the world."[†]

* Landseer's *Sabæan Res.*, p. 78. Humboldt's *Res.*, vol. i. p. 290. Clavigero, vol. i. p. 246. Hymns of Callimachus.

† Pritchard's *Egyptian Mythology*, p. 72. The Egyptians appear to have known the constellation of the Great Bear by that name.

The superstition just referred to, appears to have been common to nations in both continents. The Mexicans believed when there was an eclipse of the sun or moon, that one of those bodies was being devoured by the other. On these occasions they displayed great grief, and to terminate the conflict, discharged their arrows towards the heavens; they also beat their dogs and servants, in hopes that by their howling and cries the same result would be produced. The Peruvians believed these phenomena portended some great calamity; that the eclipsed body was sick and about to die, in which case the world would perish. As soon as an eclipse commenced they made a dreadful noise with their musical instruments; they struck their dogs and made them howl, "in the hope that the moon, which they believed had an affection for those animals in consequence of some signal service which they had rendered her, would have pity on their cries."* The Araucanians called eclipses the "deaths" of the Sun and Moon.† The Remos, on the banks of the Ucayale, have similar notions, and discharge arrows towards the heavens, believing that some wild beast is devouring the eclipsed body.‡ "If an eclipse happens," says Charlevoix, speaking of the Indians of Canada, "they imagine there is some great combat in the heavens, and they shoot many arrows into the air, to drive away the pretended enemies of the sun and moon. The Hurons, when the moon is eclipsed, fancy that she

—*Drummond's Origines*, vol. ii. p. 176. *Saulnier's Observations on the Zodiac of Denderah*. The Indians of Canada, says Charlevoix, "give the name of the Bear to the four first of those we call the Great Bear." *Voyage*, vol. ii. p. 172. *Tanner's Narrative*, p. 321.

* Vega, vol. i. p. 108.

† Molina, vol. ii. p. 84.

‡ Smyth's Narrative, etc., p. 230.

is sick, and to recover her from this sickness, they make a great noise, and accompany this noise with many ceremonies and prayers; and they never fail to fall upon the dogs, with sticks and stones, to set them a yelping, *because they believe the moon loves those animals.*"*

The Chinese, Malays, and Hindoos had similar superstitions. In China, according to Grosier, when an eclipse occurs, a frightful noise of drums and cymbals is made; the Chinese "think that by such a horrid din, they assist the suffering luminary, and prevent it being devoured by the celestial dragon."† In every improved language of the Indian archipelago, says Mr. Crawford, "an eclipse is called *Grahana*, and the dragon which the Hindus suppose attempts to devour the luminary, *Rahu*, both of them pure Sanscrit words." "The Malays sometimes call an eclipse, 'the devouring by the dragon,' *makan Rahu*. There is to this day hardly a country of the archipelago, in which the ceremony of frightening the supposed monster from his attack on the luminary is not performed. This consists in shouting, in striking gongs, but above all, in striking their stampers against the sides of the wooden mortars."‡

The astronomical analogies which have been thus briefly detailed are of great extent, and indicate an origin at some ancient epoch. They do not prove that the civilized Americans came either from Egypt, Etruria, or Hindoostan, but at the same time, they give rise to the idea, that many of these affinities were derived from some primitive and common source.

* Voyage. vol. i. p. 173.

† Grosier's China, vol. ii. p. 438. Barrow, p. 191.

‡ Crawford's Indian Archipelago, vol. i. p. 305. Marsden's Sumatra, p. 194.

They increase in weight, however, as we approach Oriental Asia; there we find among the Siamese and Javanese the months divided into light and dark halves;* and there also, is the only appearance of a method of computing time similar to the Mexican. The Mexican week was composed of five days, and on every fifth day, their fair or great market was held.† The week in Eastern Asia, as derived from Hindoostan, consisted of seven days, and as such was known to the Javanese and Siamese. But it is curious that the original native Javanese week consists of five days, and its principal use “is to determine the markets or fairs;” this week is called *Pakanan*, or market-time. Of the etymology of the words designating the five days, nothing is known; but the week appears to form a part of an ancient civil calendar, existing before they had any communication with the Hindoos, the relics of which are insufficiently understood. It seems clear, however, that the divisions into which the year was divided, in this system, related to no astronomical period, but were of arbitrary duration like the Mexican months. The year was divided into thirty months, which Mr. Crawford thinks each expressed half lunations; and one of the native cycles, probably related to the same calendar, like the Maya age consisted of twenty years.‡

The examination of the astronomical knowledge of the Mexicans and other American nations, satisfactorily indicates not only the existence of accurate ideas of the movements and

* They reckoned according to the days of the divisions, and not of the whole month. *Crawford's Siam*, vol. ii. p. 19.

† Clavigero, vol. i. p. 293.

‡ Crawford's *Indian Archipelago*, vol. i. pp. 292, 304.

relations of the heavenly bodies, but also a series of observations continued for many ages.* These systems were partly of native origin, but in their numerous analogies to those of other ancient nations, we discover relics of a high antiquity, and which justify the conclusion that they are the remains of a primitive system of astronomy, the characteristic features of which, have been more or less preserved by almost every ancient civilized people. They afford, therefore, the highest and clearest evidence of early cultivation, and, in determining the epoch of the migration to this continent, carry us back to that period when mankind were first scattered abroad over the face of all the earth.

There are some circumstances which have induced antiquarians to suspect, that the ancients were skilled in Optics, and applied their knowledge in that science to the prosecution of celestial observations, a conclusion, which the perfection attained in astronomy appears to favor. Sir W. Drummond, and other writers, have cited some curious passages from the authors of antiquity, corroborative of this conjecture. Thus Aristotle says, that the Greeks employed mirrors when they surveyed the heavens; the Pythagoreans asserted, that the surface of the moon was diversified by mountains and valleys; the Greeks used burning mirrors of glass, and concave and convex metallic mirrors, according to Suidas and Plutarch; and there was a

* In their paintings, eclipses and the appearance of comets were marked. Boturini stated that the eclipse of the sun which happened at the death of the Saviour was denoted in the paintings, in the year 7, Tochtli; and Clavigero, in commenting upon this assertion, says that he found the 30th year of our era to correspond with 7, Tochtli.—*Hist. Mexico*, vol. i. p. 87.

report among the same people, that Pythagoras had shown letters written on the disk of the moon, by means of a mirror. Strabo remarks, that "vapors produce the same effects as *the tubes*, in magnifying objects of vision by refraction," and he also says, that a large mirror was elevated on the summit of the Temple of the Sun, at Hieropolis in Egypt, and another at Pharos. M. Bailie asserts, the ancients knew that the milky way consisted of stars; and the Persians had a tradition to the same effect; from the number of stars which, according to Pliny, had been counted in his time, the same conjecture is supported; and the missionaries found more stars marked in the celestial charts of the Chinese than formerly existed in those of Europe. Democritus likewise said, that some of the planetary bodies were unknown to the Greeks. The Chaldeans asserted that they had discovered more. These, it would seem, could only have been the satellites of Jupiter, and perhaps of Saturn. That the Brahmins had discovered these satellites, may be strongly inferred from their reckoning the planetary bodies to be fifteen in number. A similar supposition has been made in relation to the Druids, of whom Diodorus Siculus says, that they brought the sun and moon near to them. The exquisite engraving of the gems found in Egypt, needing the aid of the microscope in its execution, indicates the same fact in that country. The learned authors,* from whose researches these authorities have been taken, seem to have overlooked another curious circumstance corroborative of this conjecture—the use of mirrors in the ancient religious ceremonies. The Etruscan *pateræ* found

* Drummond's *Origines*, vol. ii. p. 246. Higgins's *Celtic Druids*. Davies' *Celtic Researches*, p. 192.

in the sepulchral chambers, upon which scenes of mythological history are often engraven, were probably real mirrors, and had some connection with the sacerdotal office.* The same misnomer was given to the silver *pateræ* in Egypt, by Quintus Curtius,† when speaking of the ceremonies practised by the priests of Ammon, when they consulted *the oracles*. The custom was, he says, to carry the image of the deity in a golden ship, on each side of which hung many silver *pateræ*. The Delphic priests were also known by the name of *Pateræ*.‡ In Hindoostan, Kali, the wife or goddess of Siva, who represented *time* the destroyer, is sometimes represented with a mirror in her hand. The Chinese circular mirrors are like those still found in Egypt,§ metallic mirrors are found in the Mongolian mounds in Siberia, and we know that they are still employed by the Mongols in the Budhaistic religious ceremonies. In Mexico, we are told that in one of the temples there was "a house of mirrors," and the name of the Mexican god "Tezcatlipoca," who was the prototype of the Hindoo Siva, signifies "Shining Mirror."|| To this may be added the testimony of Ulloa, who, speaking of a mirror seen by him, which had been taken from one of the Peruvian mounds, which was concave, and greatly magnified objects, remarks, "I have seen them of all kinds, (convex, plane, and concave,) and from the delicacy of the workmanship one would have thought, these people had been furnished with all kinds of instruments and completely skilled in optics."¶

* Anthon's Class. Dict., Etruria. † Liber iv. c. 7.

‡ Bryant's Myth., vol. i. p. 308. § Davis's China, vol. ii. p. 230.

|| Clavigero, vol. i. p. 244.

¶ Ulloa, vol. i. p. 495.

CHAPTER IX.

ORIGIN OF THE ABORIGINES. RELIGION.

PHILOSOPHY and history alike sustain the position, that the sentiment of religion is common to the whole human race, and is an element in the very constitution of our moral nature. A clear distinction, however, may be drawn between such religious systems as appear to be pure inventions of man, and such as present internal evidence of having been transmitted by tradition from the primitive ages of the world. In the latter class we find ideas the origin of which cannot be traced to the light of nature or the human reason, though when once known, both nature and reason testify to their truth. The belief in one Supreme Being, seems to be a characteristic exponent of this kind, tending to indicate, when existent among nations unreclaimed by Christianity, that they have received this noblest portion of their faith from an ancient traditionary source. The human mind in a depraved and unenlightened state, is not capable of arriving by its own strength at the idea of unity in the governing power of the Universe, but on the contrary, the natural course of reasoning with degraded and barbarous tribes seems always to have resulted in Polytheism. Every manifestation of power is attributed to the agency of a distinct and independent spirit. The first step is to conceive the existence of evil spirits. The beneficent powers of nature—those agencies working gradually and unseen, for the production of good throughout

the earth, are so quiet in their progress, and imperceptible in their action as to escape the observation of an ignorant and unreflective mind; but the sudden and active operations of the elements, which sweep on in violence, leaving death and ruin in their track, are palpable developments of power, and being superior to human control, are attributed to deities of evil disposition. Thus the winds and waves, the lightning, thunder, and tempest are, at the same time, feared and worshipped. As observation becomes more extended, as man advances in acquaintance with the laws of matter,—the calmer changes of nature, which are always working in goodness, are perceived; his religion then expands into a purer belief, and benign spirits are created. But even in a higher civilization, equal to the most intellectual days of Greece, the Polytheism originated in darker ages retains its grasp upon the soul.

It has been doubted, and with considerable force, whether from the brighter light and clearer evidences of modern science,—all-penetrating, all-grasping,—Natural Theology can claim, as its own fruit, the proof of the existence of one God, independent of the previous illuminations of revelation; but it certainly cannot be, that barbarism, without such divine aid, direct or traditionary, can reach so lofty, so august a conception. The attribution of all the operations of nature, *apparently* so discordant in their action, and so dissimilar in their origin, to one controlling power, is attained and proved by the results of modern science and observation, only through that strict and searching examination which has developed a harmonious system of regulation pervading the whole,—a system, by which effects, the most diverse in their character and appearance, are deduced from the same laws acting upon different bodies, in

different states. Thus we know that the whole universe, in its lowest and most insignificant parts,—in its minutest details, as well as in its grandest sphere of action, is constituted under a few fundamental laws, conceived in the highest wisdom, planned with the most wonderful skill, and acting in the most consummate order and harmony. It is from these evidences of design, and above all from this *harmonious* action of the principles of nature, triumphantly developed and confirmed by every successive discovery in natural philosophy, that natural theology has deduced its noblest truths. Surely then, the human mind, in a state of degradation and rudeness,—benighted and uncultivated, cannot be deemed capable of attaining a conclusion, which has been awarded only to the most advanced state of knowledge the world has yet known. And if this be true, that wondrous part of the Indian faith, the belief in the existence of *One* Supreme Being, is not of indigenous origin, but transmitted from a primitive source. The same course of reasoning may be applied to the belief in the immortality of the soul, and a future state of rewards and punishments. Savages do not reason like philosophers, and yet in the most enlightened ages these doctrines, had they not been confirmed by sacred evidence, instead of being ranked among the class of well ascertained truths, could only have been considered as probabilities. It is true, that so far from being opposed to reason and to morals, they find approving arguments and sympathies in the human soul; and hence it was, the renowned of antiquity were urged by the voice of nature from within, to reason, and to argue, and to press the intellect into the struggle, but the result was scarcely more successful than to show that by the light of reason the immortality of the soul was a reasonable probability. Even

Plato, confiding in this inward testimony, was "sure of the thing, but not of the argument,"—and so likewise Cicero. "Any one conversant with his writings must know that he could get no further than this, that it was desirable rather than certain. Cicero has collected together the opinions of hundreds of philosophers on such subjects, and what he has said may be looked upon as a fair sample of what deism can do. No deist can hope to go further on this point than Cicero."* Are we not justified, then, in considering a faith in these doctrines as evidence of the origin of that barbarous people, in whose religion they are incorporated and recognized, from a more enlightened and civilized ancestry?

With this criterion, whereby to test the source of the religious tenets of nations, let us examine those religious institutions of the great American family, which have been rashly classed as depraved superstitions without a ray of the true light which lighteth the world, and we will discover relics of a more noble creed, which at the same time carry us back to those primeval periods when man still worshipped his Maker, and exhibit some interesting points of connection by which the aborigines are affiliated to the ancient nations of the old world. We may pursue this chain of argument with the more certainty, because that sentiment which generally renders man so firmly attached to his religious belief, thereby securing its unalterability, is a peculiar trait of the American race in common with all the primitive nations of the old continent. It is one of the indices of the ancient origin of any people—for ancient theology

* Christianity a Divine Revelation, by Robert Broadley, Curate of Eccles, Lancashire, p. 15.

was unchangeable. Innovations were rejected with holy horror—rites and ceremonies, though the original meaning of which they were but symbolic were wholly lost, were still adhered to because of their very antiquity.

In treating of the religious institutions of the American aborigines, the same view will be found to embrace the barbarous as well as the civilized nations, another evidence of their common origin. "The more I search into the ancient history of the world," says Schlegel, "the more am I convinced that the cultivated nations commenced with a purer worship of the Supreme Being; that the magic influence of nature upon the imaginations of the human race, afterwards produced Polytheism, and at length entirely obscured the spiritual conceptions of religion in the belief of the people, while the wise men alone preserved the primitive secrets in the sanctuary. Hence the mythology appears to me to be the latest developed, and the most fluctuating part of the ancient religion."

The evidences of a belief in, if not worship of a Supreme Being, among most of the American tribes, are clear and numerous. The Esquimaux, it has been thought, are an exception to this assertion, but it seems that they have notions of a great and good Spirit of superior power;* and that they do not believe in the dissolution of the soul at death, is evident from their superstition as to the northern lights, which they call "the spirits of the dead;" other northern tribes term the same phenomenon "the dance of the dead."

The Patagonians pray to their chief demon or ruling spirit. Falkner says, that at the head of their good deities, is "the

* Parry, Graah.

Lord of the dead," and Pennant, that this great and good being, is called "the Creator of all things."* The Fuegians have ideas of a Superior Being.†

Some of the Californian tribes believe, that there is in heaven a Lord of great power, denominated Niparaya, "who made the earth and the sea, gives food to all creatures, and created the trees and every thing we see," and who is not visible, possessing no physical form like man. The Cochimies, the most numerous nation of California, said that there was in heaven a being whose name signified, "He who lives, and who created all things."‡ The Indians of the Upper Orinoco, worship a good Spirit who regulates the seasons and the harvest;§ the Guaranies believed in God, and also in a spirit of evil they called Ana.—"*We already know*," said one of the chiefs of this tribe, "that there is some one who dwells in heaven."|| The Patagonians, says the same author, described the Creator as a Being "worthy of all veneration, who cannot be seen and who does not live in the world;" they believed also in the immortality of the soul.

The Araucanians, in their religious system, acknowledged a Supreme Being, called "Pillan," a word derived from Pulli or Pilli, the soul, and which signified the Supreme Essence. He was also termed, "the Spirit of heaven—the Great Being—the Thunderer—the Creator of all—the Omnipotent—the Eternal

* King and Fitzroy, vol. i. pp. 76, 90; and Falkner and Pennant, cited in *ibid.* vol. ii. pp. 161, 162.

† *Ibid.* vol. i. pp. 227, 315, ii. 167, 190.

‡ Venegas. *Hist. Calif.*, vol. i. p. 88. *Ibid.* p. 92.

§ *Hum. Pers. Nar.*, vol. iv. p. 273. Depon's *Voyage*, vol. i. p. 197.

|| Dobrizhoffer, vol. i. pp. 62, 63; vol. ii. p. 90.

—the Infinite.” He was invoked in prayers.* They also believed in the immortality of the soul ; that it is carried away after death towards the West beyond the sea, but before it enters its paradise, that it is obliged to pay toll to a malicious and wicked spirit.†

The Arikaras believed in a Supreme Being, “ the Master of life ;” the Osages in a great and good Spirit, and in future rewards and punishments.‡

The Brazilian tribes acknowledged the existence of a great Creator, to whom some sang hymns of praise, and they admitted the immortality of the soul, but with the qualification that the spirits of their chiefs and sorcerers entered into a state of enjoyment, while those of the others were condemned to wander about the cemeteries.§

Of the nations occupying the north-eastern portions of the United States, a similar account is given.|| Loskiel says, “ The prevailing opinion of all these nations is, that there is one God, or, as they call him, one great and good Spirit, who has created the heavens and the earth, and made man and every other creature.” “ That they consider the soul as immortal, and even suppose a resurrection of the body, may be inferred from their usual manner of expressing themselves, when they say, ‘ we Indians cannot die eternally ; even Indian corn, buried in the ground, is vivified and rises again.’ Many believe in the trans-

* Molina, vol. ii. pp. 75, 77.

† Ibid., vol. ii. pp. 79, 81. Frezier's Voyage, p. 59.

‡ Brackenridge's Journal, p. 152. Des. Red River, p. 119. Nuttall's Arkansas, p. 95.

§ Henderson's Brazil, pp. 210, 213.

|| Loskiel, pp. 33, 34, 36. Charlevoix, Voy., vol. ii. pp. 16. 109.

migration of souls, and imagine that they were with God before their birth, and came from him; or that they have been formerly in the world, and are now living over again." They seem also to have had very distinct ideas of a future life, in which the good were rewarded, and retribution was awarded for moral offences. Charlevoix bears testimony to the same point, and adds, "*The belief the best established amongst our Americans, is that of the immortality of the soul.* Nevertheless they do not believe it purely spiritual, no more than their Genii, and to speak the truth, they cannot well define either one or the other. When we ask what they think of their souls, they answer, they are as it were the shadows and the animated images of the body: and it is in consequence of this principle, that they believe every thing is animated in the universe. Therefore it is entirely by *tradition* that they hold that our souls do not die." Heckewelder informs us, that their children are taught "that they are indebted to a great, good, and benevolent Spirit, who not only has given them life, but has ordained them for certain great purposes."* "Many winters ago," said Tecumseh, "there was no land, the sun did not rise and set: all was darkness. The great Spirit made all things."† "There is still another great Father to whom I am much indebted," said a Pawnee chief, "it is the Father of us all—he who made us and placed us on this earth."‡

The Knisteneaux acknowledge the existence of the great

* Heckewelder's Historical Account, p. 98.

† Hunter's Memoirs, p. 48.

‡ Buchanan's Sketches, p. 41. See an able article on religion in this work.

"Master of life;"* and the Chippewyans, a future life, where vice is punished and virtue rewarded.

A similar faith was observed among the natives of the West India islands. They revered the great Spirit;† and had a firm confidence in the righteous judgments of another world, as may be gathered from the extraordinary address reported to have been made by one of the chiefs of Cuba to Columbus. "Whether you are divinities or mortal men," said he, "we know not. But if you are men, subject to mortality like ourselves, you cannot be unapprised, that after this life there is another, wherein a very different portion is allotted to good and bad men. If, therefore, you expect to die, and believe with us, that every one is to be rewarded in a future state according to his conduct in the present, you will do no hurt to those who do none to you."

Passing now to the civilized nations, we find similar religious notions. The Mexicans worshipped "a supreme, absolute, and independent Being, to whom they owed fear and adoration." "They believed him to be invisible, and named him only by the common appellation of God, in their language Teotl." They called him also, Ipalmemoani, that is, He by whom we live, and Tloque Nahuaque, He who has all in himself.‡ They believed also in the immortality of the soul, and a future state of rewards and retribution. The Peruvians, as also the nations whom they conquered and termed barbarians, recognised the same great Being under the title of Pachacamac.

* McKenzie, vol. i. p. 124. Ibid. pp. 155, 157.

† Edwards' Hist., p. 80.

‡ Clavig., vol. i. pp. 241, 242.

Hence Garcillasso de la Vega says,* that the sun was worshipped, but as the symbol of the Supreme Being, whom they called Pachacamac, or "the soul of the world,"—"he who made the world;" which word was so sacred, that it was spoken only with extreme dread. "We acknowledge," said the Inca Atahualpa, addressing Pizarro, "no other gods than Pachacamac, who is Supreme—the Sun, who is inferior to him, and the Moon, who is his sister and wife;" and again, "The first is God, whom we call Pachacamac and Viracocha."† The Peruvians not only believed in the immortality of the soul and future retribution, but, according to Vega, Cieça, Gomara and other authors, in the resurrection of the body; and according to the latter, the Spaniards, when they opened the tombs and scattered the bones, were besought by the natives to refrain, so that the dead "might find them together when they should rise: from which it is manifest," he adds, "that they believed in the resurrection of the body and the immortality of the soul." Many of the superstitious rites connected with interment, as practised by most of the Indian tribes, the articles deposited in the grave, the reverence for the dead, the great and unwearied care evinced in the preservation of their bodies or bones, all tend to excite a suspicion that the same idea of resurrection was originally more prevalent.

If we compare these ideas with those of some of the ancient nations of the other continent, some analogies are developed. Upon examining the religious opinions of the Hindoos, we find the Supreme Being recognised. Thus, in the Puranas,

* Commentations, vol. i. p. 50.

† Garcillasso, vol. ii. *Trois*. Ed., 1688, p. 455.

God is styled "the great God; the great omnipotent, omniscient one; the greatest in the world; the great Lord who goes through all worlds incapable of decay." In the Vedas, he is called "the pure Brahme, whom none can apprehend as an object of perception, above, around, or in the midst. The first born; the God who pervades all regions. He, prior to whom, nothing was born; who became all beings—himself the Lord of creatures; He, who made the fluid sky and solid earth; who fixed the solar orb and celestial abode; whom heaven and earth mentally contemplate; the mysterious Being, in whom the universe perpetually exists, resting on that sole support; in whom this world is absorbed, and from whom it issues."* Mr. Pritchard, in his learned analysis of the Egyptian mythology, demonstrates that they had an idea of a First Cause, and regarded

* Asiatic Res., vol. viii. p. 352. Ibid. p. 432. "We cannot refuse," says Mr. Schlegel, "to admit that the ancient sages of India possessed some idea of the true God. All their scriptures are indeed full of phrases and expressions, which declare this doctrine, in as dignified, as clear and exalted a manner, and in terms as profoundly scrutinized and as definite, as human language can adopt, in reference to the nature of an infinite being."—*Schlegel*, tr. in Pritchard's *Mythology*, p. 232.

"The Supreme Being alone existed; afterwards there was universal darkness; next the watery ocean was produced by the diffusion of virtue: then did the Creator, Lord of the Universe, rise out of the ocean, and successively frame the sun and moon."—*Colebrook on the Vedas*, vol. viii. *As. Res.*, p. 397.

"Originally the Universe was indeed soul only; nothing whatever existed, either active or inactive. He thought, 'I will create worlds.' Thus he created these various worlds, water, light, mortal beings, and the waters."—*As. Res.*, vol. viii. p. 421.

the Deity as an eternal, intellectual and spiritual Being.* Eusebius says, that the Egyptians "acknowledged one intellectual Author or Creator of the world, under the name of Cneph," and adds, that he was a benevolent Spirit. Plutarch styles him "an uncreated and immortal Being;" and Jamblichus, as "a self-intelligent mind, absorbed in his own contemplations," and as "the ruler of the celestial gods." That both of these nations entertained the doctrine of the immortality of the soul, and that it existed in a state of happiness or misery hereafter according to the actions of this life, is still more clear.

In China, among many superstitions, vestiges of an ancient faith in, and worship of the Supreme Being, are still existent. They considered the Creator as a Supreme and creative intelligence, under the names of "Tien," "heaven," and "Shang-ty," "the Supreme Ruler," who pervades the universe, and awards moral retribution. Tien, or heaven, "stands at the head of their moral, as well as physical system, and most of the attributes of the Deity are referred to it. The common people colloquially apply to it a term of respect, equivalent to *venerable Father*, or *Lord*, and Choo-tsze himself says, on one occasion, that 'heaven means God.'"[†] The Chinese "philosophers," or "sect of the learned," have attacked the doctrine of the immortality of the soul, but this belief is universally prevalent among the people, and is the basis of most of their superstitious practices.

* Euseb. Præp. Evang., lib. iii. p. 174; lib. i. c. 10. Plut. de Is and Osiris. Jamblichus de Mysteriis, sec. viii. cap. 3, as cited in Pritchard, p. 170, et seq.

† Hist. of China, by J. F. Davis, vol. ii. pp. 68, 78.

The Polynesians, as appears from their traditions, believe in the Supreme Being, of whom they say, "that he is the soul of the universe; that it is he that imparts life and intelligence to every thing that lives, and has understanding;" * * "that he alone is all and in all; both creation and the Creator;" * * "that being alone in existence, he transformed himself into the Universe;" "that he is an uncreated Being, self-existent, the Supreme Intelligence."*

Such are the traces of the original pure worship which, unalloyed with the inventions of man, at a remote era prevailed among the ancestors of the American aborigines in common with ancient nations of the old world. How far this analogy affords ground for tracing their origin, has already been adverted to; but upon further inquiry, we find developed a most singular instance of the preservation of a vital tenet of primitive religion, also common to both hemispheres, and that is, a recognition of the principle that the Supreme Being is not to be adored in representations by images, a tenet the more remarkable amid a system of idolatry otherwise universal. No savage tribe of America has been found that worshipped or represented the great Spirit by a carved image. To the Master of life they sometimes address their prayers† and hymns of praise, but as to a Spirit not to be figured in material workmanship. Their various inferior deities are venerated under numerous forms and shapes, but with these their idolatry ends. The same may be observed of the civilized nations, whose system of image worship, with this single exception, was no less

* Silliman's Am. Journal, vol. xxx. pp. 285, 287, 288.

† Mackenzie's Voy., vol. i. p. 124. Heckewelder's Hist., acc. p. 204.

extensive. The Supreme Being, as worshipped by the Mexicans, was left unrepresented by any image, "because they believed him to be invisible." There was but one temple in all Peru dedicated to Pachacamac, and that was not erected by the Peruvians proper, and when asked the cause, that people replied, that "they had never seen him, wherefore they built no temples for his worship, nor offered him sacrifices, and that they regarded him as the unknown God."*

Many of the Indian tribes of North America paid adoration to the heavenly bodies.† The Hurons said their chiefs were descended from the Sun, and that the sacred pipe was derived from the same luminary, being first presented to the western Pawnees, and by them transmitted to the other tribes.‡ The Mandans and Minitarees have a similar tradition.§ Both the Algonic nations and the Iroquois|| venerated the Sun, and it is probable, their council fire was a remaining symbol of their ancient religion. The Natchez and other southern tribes, were fire-worshippers, and erected temples and performed sacrifices to the Sun.¶ The natives of the West India islands worshipped the

* Vega, vol. i. p. 61. Clavigero, vol. i. p. 242.

† Charlevoix, pp. 145, 195.

‡ Ibid., p. 133.

§ Nuttall's Arkansas, p. 276.

|| Colden's Hist. Five Nations, vol. i. pp. 115, 175. Schoolcraft's Narrative, p. 20.

¶ "The greatest part of the nations of Louisiana had formerly their temples, as well as the Natchez, and in all these temples a perpetual fire is kept up. It should even seem, that the Maubilians enjoyed a sort of primacy in religion over all the other nations in this part of Florida; for when any of their fires happened to be extinguished through chance or negligence, it was necessary to kindle them again

same celestial body, together with the Moon.* The Delawares and Iroquois, according to Loskiel, also offered sacrifices to the Sun and Moon, and had a festival in honor of the element of fire, which they considered the first parent of the Indian nations.† Incense or smoke, probably from a beautiful analogy in its ascending course to the heavens, was an ancient symbol of prayer, and we find it used as a method of adoration by the Indians. The Osages smoke to the Sun.‡ The Sioux, Araucanians,§ Creeks and Hurons, to the Sun and to the cardinal points,|| as did also the Natchez and other southern tribes. The Indians of California asked the Jesuit fathers who first visited them, whether they were "Sons of the Sun," looking upon them as deities.¶ The Botocudos of Brazil, "held the moon in high veneration, and attributed to her influence the chief phenomena in nature."** The Caciques of the Guaranies, were called "Suns;"†† and the Puelches worshipped the Sun.‡‡ Thus it appears that the adoration of the heavenly bodies, and fire

at theirs. But the temple of the Natchez is the only one subsisting at present, and is held in great veneration by all the savages inhabiting this vast continent."—*Charlevoix, Voyage*, vol. ii. p. 273.

* Edwards. Hist. W. Ind., vol. i. p. 80.

† Loskiel, pp. 41, 43.

‡ Nuttall's Arkansas, p. 95.

§ Molina, vol. ii. p. 71.

|| Bartram's Travels, p. 450. Description of the Ohio, p. 177.

Nuttall, p. 175. Brackenridge's Journal, p. 138.

¶ Venegas. Hist. California, vol. i. p. 164.

** Mod. Trav. Brazil, vol. ii. p. 183.

†† Dobrizhoffer, vol. i. p. 60.

‡‡ Ibid. vol. ii. p. 89.

worship, which anciently existed among the Etrurians, Greeks, Egyptians, Hindoos, Scythians, Chinese, Mongols, Mexicans, Muyscas and Peruvians, was common likewise to most of the barbarous American tribes.

The Polytheism of the barbarous tribes was most universal in its character. It has been seen that, in common with other ancient nations, they believed in the existence of a Supreme and benevolent Being, presiding over the Universe, but that this belief was nearly, if not wholly, more an abstract faith than a practical one. It was connected, however, with another idea—the doctrine of emanations. The high and sublime conception of the omnipresence of the Creator, was degraded into the superstition, that a portion of his Spirit animated each one of his works; and from this opinion, the progression was rapid to the belief in numerous independent spirits, good and evil, accordingly as the object, supposed to be animated, exercised a good or malign influence. The worship of the celestial bodies and of fire, a belief in the transmigration of souls, animal worship, the practice of magical arts and sorcery, were the successive steps of debasement from a noble primitive creed, and constituted the real practical religion of the aborigines.

In the development of this singular Polytheistic system, the whole visible and invisible creation is animated—vitality is given to all the material world, and the earth and the heavens are filled with an active and life-like intelligence, from the lowest animal in the scale of being to the orbs of the celestial sphere. Those objects with which man is in continual intercourse and contact, being thus animated with souls, methods of conciliating them, not only by sacrifices and fasts, but by an extended system of necromancy, are suggested by the crafty

and cunning, pretending to supernatural powers. Different beings are supposed to occupy various shapes in another state of existence; unseen spirits are continually floating in the surrounding atmosphere;—the decay of matter, and the phenomena of life and death, whereby changes are perpetually induced in creation, are merely manifestations of the transfer of a spirit from one state of existence into another, while the Sun, Moon, and Stars, constant and steady in their course, are viewed with a higher reverence, as superior to and exempt from the general law of decay;—such was the groundwork of the American Polytheism; and its developments were in correspondence. The worship of the Creator, though still existent, as we have shown, appeared almost like a forgotten and time-worn relic in the aboriginal religious rites. Sabaism was the first stage of degradation, and accordingly we find its vestiges somewhat more prominent, though it was supplanted, in a great degree, by the grossest system of Polytheistic idolatry.

Garcillasso de la Vega labors with great zeal to prove, that the Incas permitted no other worship than that of Pachacamac, and the heavenly bodies. If this were so, those sovereigns made the most important innovations in the religious customs of their subjects, for before the foundation of that empire there prevailed a most extensive system of idolatry. All nature, animate and inanimate, seems to have been adored, and not only were the elements considered as divine, but also every material object, however vile or monstrous. Besides these, each individual had a particular deity to whom his prayers were addressed, and who was believed to have an especial care and guardianship over his devotee. They had also implicit faith in dreams, and drew from them prognostications of future events.

Some tribes had sorcerers who pretended to possess the means of communication with evil spirits, and through their agency, to exercise the prophetic art.* In addition to the ordinary offerings of fruits and animals, they sacrificed human beings of all ages; and the entrails were examined to discover if the sacrifice were acceptable. Animals were believed to have souls, and to be distinguished from man only by the absence of reason. In one case we have clear evidence of a belief, that the souls of the dead, after a time, return and enter the bodies of infants at their birth. In all these ideas, are to be perceived the characteristic features of that religious faith which lay at the very root of the ancient mythology of Egypt and Hindoostan—the idea of a universal soul, from which all life proceeds and into which all life is resolved. And upon examining the superstitions of the other aboriginal nations, they appear to be all conformed to the same original type. Without entering into a detail of the complex system of Mexican idolatry, it is sufficient to state that they believed in an evil spirit, the enemy of mankind, thirteen principal gods, and numerous inferior deities, the images of which were placed in their houses like Penates. They considered animals as having immortal souls, and it was customary at funerals to kill a techichi, a domestic quadruped resembling a dog, to accompany the deceased in his journey to

* In the valley of Rimac, in Peru, was the *Huaca of Rimac*, or “the god that speaks,” which name appears to have been given to the deity worshipped there, by the ancient Indians, “because he spoke to them and answered their questions:” in fact, here was the Oracle of the Indian nations.—*Ruschenberger*, p. 202. In the Quichua this word signifies, “to speak,” “to disclose a secret.”—*Vocabulario Qquichua*, p. 326.

Paradise; they believed also in the doctrine of transmigration. Human sacrifices were customary; and on particular occasions, in preparation for the sacred festivals, they engaged in penitential practices, such as fasting and watching, mangling and cutting their flesh, piercing the tongue and other parts with the spines of the aloe, and similar acts of austerity. Among their priests was a class called diviners, probably like the Indian sorcerers or physicians; and the practice of the medicinal art was accompanied with many superstitious ceremonies.

The only priests known among the barbarous tribes were Sorcerers or jugglers, who claimed supernatural powers by means of a pretended intercourse with some evil spirit. The Indians attributed all diseases to the agency of evil demons, and thus the Sorcerers came to exercise the healing art. For the purpose of obtaining an interview with these spirits they prepared themselves by fastings, watchings, and ablutions. They then resorted to incantations, violent exercise, dancing and contortions. The more convulsive these physical contests, the greater was the power of the invisible being whom they sought to render obedient to their commands; and finally, the triumph of their supernatural skill was exhibited in feats of legerdemain, such as stabbing themselves with knives without drawing blood, and swallowing arrows and clubs. They then proceeded to prophesy, and to cure the sick. These singular rites were common to nearly all the tribes from the Arctic ocean to Cape Horn.*

* The Egyptians believed that diseases were occasioned by wicked demons, and their cures were founded mostly on magical arts, by which the demons were coerced or conciliated. *Pritchard's Analysis of the Egyptian Mythology*, p. 94. Also, *Lane's Modern Egyptians*, vol. i. p. 310.

The Patagonians and Fuegians believe in the existence of a multiplicity of spirits, good and evil, and each family has its own household god or idol; they consider sickness to proceed from the influence of some evil spirit, and for the purpose of exercising control over these invisible beings, there are wizards or necromancers.* The Guaranies also have magicians who cure diseases, and foretell the events of the future. At the interment of the dead, they kill the horses and dogs of the deceased at his grave.† These jugglers, who possess supernatural powers, are called Keebet; they fast before commencing their magical ceremonies. The reverence for the dead among these southern tribes, equals that entertained by the natives of any other part of the continent. All the Brazilian tribes believe in numerous evil spirits, and consequently have their conjurers, who are diviners, priests, and physicians.‡ The sick are often cured by them, by smoking or sucking the part affected, in which manner the wicked spirit causing the malady is expelled. An idea of these superstitions may be gathered from a description of those of one tribe, the Coroados. "They ascribe a direct intercourse with the demons to their *Pajé*, who is acquainted with many powerful herbs, appears to be at the same time their priest and physician, and contrives to maintain his credit among them by all kinds of conjuring tricks. In extraordinary cases he is applied to for his advice, which he gives after consulting the demons; for which purpose he generally chooses a dark tempestuous night. * * The Indian also wears round his neck strings of the eye-teeth of ounces and of

* King and Fitzroy, vol. i. pp. 90, 227; vol. ii. pp. 155, 162.

† Dobrizhoffer, vol. i. pp. 62, 139; vol. ii. pp. 67, 90, 271.

‡ Henderson's Brazil, p. 213.

monkeys, of certain roots, fruits, shells, and stones, which he thinks will protect him against the attacks of wild beasts and against diseases. The *Pajé* administers many medicines, which are often prepared with magical ceremonies, practises a kind of exorcism by fumigation, and maintains the fear of the Indians for spirits by superstitious customs and narratives; but the misfortunes, sickness, and death of the neighbors are often ascribed to his sorceries, and he then atones for his practices with his life.”*

The Araucanians believe in a multitude of inferior spirits, who are invoked by their diviners or jugglers.† The Indians in the northern part of South America also admit the existence of evil spirits. They have religious societies composed of conjurors called *Piaches*, who are priests and physicians. The candidates are subjected to long fasts, flagellations, and other preliminary ceremonies: they are then permitted to blow the sacred trumpet, to invoke the evil spirits in dances, to cure the sick, and to prophesy. These rites are said to be very ancient, and to have been handed down from their forefathers.‡ As the Esquimaux so bury the body, that it shall not be pressed by the earth, these tribes hold that the earth must not touch the corpse.

The Charibs of the West India islands had also their magicians, called *Boyez*, who exercised an influence over the *Maboyas* or evil divinities. The candidate for admission into this caste was compelled to undergo severe penance by rigorous

* Spix and Martius, vol. ii. p. 244.

† Molina, vol. ii. pp. 78, 91.

‡ Hum. Pers. Nar., vol. iv. pp. 273, 354. Depon's Voyage, vol. i. p. 193.

fasts, scourges, suffocating fumigations, and horrid lacerations of the body. By these means a familiar spirit was placed at his command, and he took his rank as a prophet and physician.* Similar customs prevailed among the Arrowauks.

Passing to North America we find the same rites universal.† The Californian tribes had their sorcerers, who, with other curious customs, were in the habit of consulting little tablets of wood, made with great labor, on which were painted grotesque figures, the meaning of which was taught those who were initiated into the priesthood, but concealed from others; these seem to be similar to the religious songs of the Algonquins. The Aricaras have the usual Indian belief in the powers of magic, and in their preparation for those ceremonies practise personal severities, not surpassed even by the most horrid acts of self-torture customary in Hindoostan. Some cut and scarify their bodies; others suspend themselves by the arms or legs or the sides, by hooks in the flesh. "I was shown a boy," says Mr. Brackenridge, "who had drawn two buffalo heads several hundred yards, by cords fixed in the fleshy parts of his sides. I might enumerate a variety of other particulars, in which this strange self-punishment is carried to the greatest lengths."‡ The Esquimaux believe in the existence of a multitude of inferior and evil spirits, who are exorcised or conciliated by their Angekkoks or sorcerers.§ With the Copper and Dog-ribbed Indians no medicine, save charms, is used for any disease. Their

* Hist. Spanish Disc., vol. ii. p. 154, seq.

† Venegas, vol. i. pp. 69, 74, 100.

‡ Brackenridge's Journal, p. 160.

§ Parry's Voyage, pp. 145, 331, 325, 451.

jugglers pretend to swallow knives and hatchets, and their skill in these feats of legerdemain is so great, that intelligent observers have been unable to detect the deception.* In Virginia the conjurors, as described by Captain Smith, practised the same rites, and the young men, who desired to be admitted into the religious caste, were subjected to flagellations and tortures, which often terminated in death.†

The Algonquin-Lenape tribes all had their sorcerers. "The most dangerous deceivers among the Indians," says Loskiel, "are the so-called sorcerers."‡ Indeed it seems to be necessary for every savage to have his *manitto*, or tutelar spirit or deity. To these *manittos* they have recourse "when they are in any danger, when they go on any enterprise, and when they would obtain some extraordinary favor. They think they may ask any thing of them, however unreasonable it may be, or however contrary even to good behavior and honesty. But children, they suppose, are not born under their protection. They must first know how to handle a bow and arrows to merit this favor. There must also be some preparations to receive it. This is the most important affair of life."§ The child, after fastings and other ceremonies, was supposed to perceive in his dreams the form or shape under which his *manitto* manifested himself, the image of which from that time he carried with him, and to which he in future directed his prayers. To become conjurors or medicine-men other ceremonies are necessary, the principal of which, however, are long fasts. The incantations and other rites practised by these impostors, present little diversity from

* Hearne, p. 293. † Voyages and Discoveries, vol. i. p. 140.

‡ Loskiel, p. 46, etc.

§ Charlevoix, Voyage.

those already described. The most remarkable of these are the songs and dances for the *Metai* and for medicine-hunting, which are permitted only to the initiated. These are taught by figures carved on wood, and by their means the spirits are controlled, and the sorcerers obtain power over the animals of the chase, the lives and health of men, and disclose the secrets of futurity. Sacrifices appear to have been formerly of very general prevalence among these tribes, and, according to Loskiel, they were of "very ancient date, and considered in so sacred a light that unless they were performed in proper time and in a manner acceptable to the deity, they suppose illness, misfortunes, and death itself would certainly befall themselves and their families." All these songs, dances, and feasts seem to be connected with religion, and to have been preserved traditionally.*

It thus appears that a most astonishing conformity prevails in the religious ideas and customs of most of the aboriginal tribes in both continents,—a resemblance so striking, indeed, as alone to justify a belief in their common origin. These rites, it is to be observed, are nowhere of recent invention, but are invariably considered as derived from some ancient source. In the songs, allusions are often made to mythological ideas which are characteristic of the cults of Eastern Asia, and the magical practices are clearly of an Oriental character, though in remote ages they appear to have been common to many ancient na-

* James, in Tanner's Narrative, pp. 286, 341. Loskiel, p. 40. Van Der Donck's New Netherlands. N. Y. Hist. Soc. Coll., vol. i. p. 203. Charlevoix, *ibid.* McKenzie's Journal, p. 101. Schoolcraft's Nar., p. 68. Pike's Expedition, part ii. app. p. 10.

According to Loskiel, the Delawares believed in the *Mctemp-sychosis*.

tions. Amid all these dark and hideous institutions, we can perceive feeble glimmerings of a loftier and purer religion, which recognized the Supreme Being. And even to this day, nothing is more usual for the Indians than to address their prayers to the great Spirit. Sabaism appears to have been the first step of degradation, and though at the discovery retained principally by the civilized nations, to have been, at some remote epoch, common to the barbarous tribes. Its purest form seems to have been still preserved by the Peruvians, who worshipped the Sun as the symbol and emblem of Divine Power. Sabaism was based upon the principle of divine emanations, and the barbarous tribes extended this idea to its utmost development,—it was the foundation of their Polytheism and system of magic.

We are surprised to find among the aborigines many other religious customs and ideas, which, though enveloped in mysteries, and clouded by fables and superstitions, are manifestly relics of the primitive faith. It would appear as if the various branches of the human race carried with them, after the dispersion, rays of that original moral light which once enlightened all mankind. It is no despicable proof of the antiquity and sanctity of those great truths, to find among our aborigines a belief in the existence of a Supreme Being, a firm faith in the immortality of the soul, in a state of future retribution, in the doctrine of atonement as emblemized in sacrifices and expiatory self-punishments, in a deluge, and in the final destruction of the world with all its inhabitants. The early missionaries failed not to perceive these analogies to many of the principles of our own religion, and sought to explain them upon the supposition that the Gospel had once been preached in America by some of the primitive

fathers; but in view of the proofs of the antiquity of the race upon this continent, it seems just to suppose that the aborigines, in common with some of the ancient nations in the old world, had preserved feeble vestiges of those great truths which were known to man in primeval ages, and which have been purely preserved only in the sacred writings.* The testimony of Charlevoix, on this point, is interesting. "Furthermore," he remarks, "the ideas, though quite confused, which they have retained of a first Being; the traces, though almost effaced, of a religious worship which they appear to have rendered formerly to this Supreme Deity, and the faint marks which we observe, even in the most indifferent actions, of the ancient belief and the primitive religion, may bring them more easily than we think, into the way of truth, and make their conversion to Christianity to be more easily effected than that of more civilized nations."

* The Indians generally placed the abode of the spirits of the dead in the west. This circumstance has been supposed to indicate the direction of the country whence they originally proceeded; but it seems to be an ancient myth common to many other nations. The Hindoos placed the abode of their gods and their paradise in the west; so likewise the Chinese, Thibetians, Greeks, Persians, Germanic nations, and the Celts.

CHAPTER X.

ORIGIN OF THE ABORIGINES.

With the general data now possessed, the path is open towards a brief examination of such analogies as exist between the aboriginal monuments, customs, and institutions, and those of several nations of the other hemisphere.

The Celts. In many parts of England and Ireland there are mounds and mural remains, which exhibit a striking resemblance to the ancient monuments in the United States and South America. These consist of square and circular earthen enclosures, some of which are thought to be of a sacred character like that at Circleville in Ohio; of sepulchral mounds or tumuli; of fortifications, surrounded by ditches and embankments; and of terraced hills cut into an artificial form, similar to those in Peru. From these circumstances, and from a correspondence in some of the Celtic rites and customs with those of the aborigines, conjectures have been advanced, that the authors of the ancient remains at the West, may have been connected in some way with the former inhabitants of Great Britain. But as appears by the profound researches of Dr. Pritchard, the Celtic and Sanscrit are kindred languages, and the result of the investigations of English antiquarians seems to be conclusive as to

the eastern origin of the Celtic nations.* It is through Oriental Asia, therefore, that the Celtic and American monuments are affiliated. It is not surprising that those streams of population, which flowed from the same primitive fountain should present many traits of similitude. Though these two races appear to be dissimilar physically, their common Oriental origin may serve to explain such analogies as have been traced between their arts and customs.

Madagascar. A race physically approximated to the type of the Red race, has been observed in this island. Accordingly, we find a great correspondence in their customs and institutions with those of the Polynesians and Americans. This people are divided into tribes; they trace their genealogies through the female line; they revere the dead; like many of the American nations, they scrape the flesh from the bones of the corpse; with the deceased are buried his weapons, and his wealth; and over the ancient graves tumuli were erected, some of which present the form of graduated or terraced pyramids. They manufacture cloths like those of the Polynesian islanders, and they formerly fortified their towns by surrounding them with immense embankments and ditches, excavated from the

* Higgins' Celtic Druids. Pritchard's Eastern Origin of the Celtic Nations. O'Brien. Fosbrooke. Davies' Celtic Researches. Davies, on the authority of the following passage from an ancient song in the Welsh Archæology, conjectures that knotted cords were anciently used: "It is time to go to the banquet with the artists employed about their mystery, with a hundred *knots*, after the manner of our countrymen." The Druids believed in the transmigration of souls, and were skilled in the practice of magic.

earth with incredible labor. And in fine, they attribute diseases to the agency of evil spirits, and have a particular class, who practise the arts of medical magic and divination, exactly similar to the American sorcerers or conjurors.* According to Mr. Ellis, the language of these tribes belongs to the Polynesian class, and they are supposed to be the descendants of Javanese colonists.

Etruria. Italy, it is well known, was occupied in distant ages by enlightened nations, who have been distinguished by the learned under various names, as the Pelasgians, Oenotrians, Etruscans, Ausonians, and Oscans. From their traditions and monuments, the Oscans and Etruscans, or rather the Etrurians, appear to be assimilated to the cultivated races of America. Every thing relative to these people, however, is enveloped in mysterious darkness. Even the Etruscan language which was once understood by the Romans, is now entirely lost. Like the Mexican, it appears to have been harsh, and consonants were its predominant sounds. Antiquarians have traced some analogies to the Mexican language, and the words deciphered in a Perugian inscription in Tuscany, *Spancxl*, *Eplt*, and *Thunchultl*, certainly bear some resemblance to the Mexican. The divination, the rituals, and the sacred ceremonies of the Romans, which were mostly of Etrurian origin, indi-

* Hist. Madagascar, by Rev. W. Ellis, vol. i. pp. 73, 88, 110, 127; vol. ii. pp. 164, 221, 55, etc.

In the appendix to this work the following passage occurs: "Hence it may not be extravagant to express an opinion that the great Polynesian language has extended its powerful influence even into the two remote continents of Africa on the west, and South America on the east." Vol. i. p. 493.

cate that worship of nature and of the elements, which was the first and purest form of Sabaism. On the day of the third and great festival of the Mexican god, Tlaloc, the god of water, which was held in the month of May, the temple was strewed with rushes brought from the lake Citlaltepec. After performing other sacrifices, the priests, followed by the people in procession, proceeded to a certain part of the lake where in former times there was a whirlpool, and plunged two children of different sex into the water, together with the hearts of the other human victims who had been sacrificed. In Italy, on the Ides of May, the Vestal Virgins took thirty images of men made of rushes, and accompanied by a sacred procession, threw the mock sacrifices into the Tiber, from the Sublician bridge, in the place of an equal number of human beings formerly devoted to the same rites. In Mexico the termination of a cycle was attended with the extinguishment of the old fires which were kept in the Teocalli, and the kindling of the new with joyous ceremonies. The Etruscans also celebrated their secular periods by festivals, and at Rome, on the first of March in each year, a new fire was lighted in the temple of Vesta.

The Romans derived their most ancient calendar from the Etrurians. The year of Romulus consisted of three hundred and four days, subdivided into ten months, and weeks of eight days. This, like the Aztec ritual calendar, is manifestly arbitrary and derived from no astronomical period. The Aztec ritual month, it has already been observed, represented the light and dark halves of the moon, and the same division into half lunations is perceived in the Roman *Ides*. Both of these curious systems of chronology, bore a relation to a certain great secular period which they measured, and which was formed

from an accurate idea of the true duration of the solar year. The Etrurians had a great cycle of one hundred and ten years, during which two intercalations were made in the fifty-sixth, and one hundred and tenth years, whereby the religious year of three hundred and four days, and its eight day divisions, corresponded with the true time and the course of the sun. The close of the great Mexican cycle of one hundred and four years was the time also when the ritual year of two hundred and sixty days accorded with the solar year. The peculiar construction of these calendars is to be elucidated only by reference to the religious institutions of Italy and Mexico. They had probably been adopted at an early age, as the only practicable means of celebrating the rites of religion upon certain stated days. In all important public ceremonies, in all festivals, in the fulfilment of vows and the performance of sacrifices, "where even an involuntary transgression threatens to draw down vengeance" from heaven, this invariable and unerring system became highly valuable as a sacred calendar, whilst at the same time some degree of real order was preserved by making it correspond at the end of a particular number of years with the course of the sun.* The Mexicans appear to have calculated the length of the year at three hundred and sixty-five days, five hours and fifty minutes, and the Etrurians at three hundred and sixty-five days, five hours and forty minutes, a degree of accuracy which excites our astonishment; and like other ancient people, they both believed that at the end of certain astronomical cycles, periodical changes in na-

* Was not the same object attained by the great Sothiac Period in Egypt?

ture would occur, and these were watched with great anxiety and fear.

In Italy and America, human sacrifices were customary at the graves of chiefs and other illustrious individuals, but in Italy they were eventually superseded by gladiatorial exhibitions. Reference has been made to the gladiatorial contests which were usual in Mexico upon certain religious festivals; on the other hand, the Etrurians introduced gladiatorial games into Italy, and their use and prevalence at Rome may be traced to this source.

The massive style of architecture, and some of the peculiar features which characterize the arts of the Etrurians, are supposed to have been borrowed from the first and conquered inhabitants of the country; and the same remark is applicable to many of the Etrurian institutions. For the origin of all such traits of resemblance as may appear, we are to go back to the earliest ages of Italian history. The most ancient style of architecture in Italy belongs to that, which, from its colossal character, the use of prodigious masses of stone, and from tradition, is called the work of the giants or the Cyclops. In America, and particularly in Peru, the great size of the stones, the appearance of polygonal walls, and of the Cyclopean arch, indicate a similar method of construction. Pliny, on the authority of Varro, has transmitted to us a description of the mausoleum of Porsenna, above which was raised a series of *pyramids*, which indicate analogies to the structures of Egypt and Mexico. The custom of burning the dead; of depositing articles used by the deceased in his lifetime, in the sepulchres; the practice of divination; the conical caps worn by the Roman Flamens, from which he took his name, and which were

common in the East, and are perceived on the Mexican monuments; the dramatic entertainments, which were original with the Oscans, borrowed from them by the Etruscans, and thence introduced, subsequently, into Rome; the religious use of circular mirrors; the incinerary urns and vases; the Etruscan patterns observed in the Mexican monumental paintings; the Red *æen* painted on the walls of the tombs at Tarquinii, all establish other links of connection between the Etrurians and the civilized nations of America; not as indicating, however, that the latter were of Etrurian origin, but as proving the great antiquity of these features in their monuments and institutions; not as establishing a regular and lineal descent, but rather suggesting an ancient connection in the remotest ages of the world, when the arts, customs, and religion of primitive nations received that stamp which still continued to characterize them after the separation of nations.

Egypt. As it has been attempted to trace the Etrurian civilization to Egypt, so the original connection and identical origin of the ancient inhabitants of Egypt and India has been maintained with great ability and learning. As will shortly be shown, some of the pyramidal edifices of Egypt are precisely similar to the Mexican terraced pyramids; in the ornamental stucco work of Mitlan and other American temples appear those peculiar borders of meanders and grecques, which are found alike upon the ruins of Etruria, Egypt,* and India; and the Cyclopean arch was common to the Mexican and Egyptian monuments. The entrances to the Egyptian temples or *propylæa* are in fact truncated pyramids. Most of the Egyptian py-

* Denon, vol. ii. p. 5.

ramids face the cardinal points; many of the temples, or sacred places are surrounded like the American, by enclosures or walls of brick and stone;* the pyramids are often approached by elevated causeways or roads;† and as is often the case in America, the temples were in the vicinity of water, with which they communicated by avenues, or by subterranean passages; or they contained in their interior, basins or tanks of water for the sacred services. Sepulchral mounds or tumuli are to be observed in Egypt, and the Egyptians interred with the dead the instruments of their profession. No nation bestowed more care in disposing of the remains of the dead than the Egyptians;‡ Dupuis§ declares “ancestral veneration” to be one of the traits of Sabaism, and this sentiment is a peculiar feature in the aboriginal character. Embalming was customary in Peru and other civilized countries, and was common also to many of the barbarous tribes. The same doctrines appear to have prevailed in relation to the transmigration of souls, and the Mexicans, like the Egyptians, believed in the existence of a mansion for the dead, where the spirit remained for a temporary period until it was sent back again to inhabit other bodies,—in Mexico, usually, the bodies of animals.|| Mictlanteuctli, the Mexican

* Burckhardt, p. 50.

† Belzoni, vol. ii. pp. 158, 160.

‡ In the Aztec and Toltec sacrifices, the breast of the victim was opened with a knife of obsidian, and the heart taken out. In Egypt, though great skill had been attained in metallurgy, yet stone knives have been found in the tombs, and the body of the dead, in the process of embalming, was opened with an *Ethiopic* stone, or flint.—*Wilkinson*, vol. ii. pp. 261, 262.

§ Dupuis, vol. i. p. 25.

|| Clavigr., vol. i. p. 242. Pritchard's *Egyptian Mythology*, p. 202.

"lord of hell" resembles the Egyptian Sarapis, or ruler of the dead; the Egyptian Anubis was represented in his statues with the head of a dog; dogs were sacred animals and fed in his temples, and it was the office of this god to conduct the souls of the dead to their place of destination.* One of the chief ceremonies at the Mexican funerals, "was the killing a *techichi*, a domestic quadruped, resembling a little dog, to accompany the deceased in their journey to the other world. * * They were firmly persuaded, that without such a guide, it would be impossible to get through some dangerous ways which led to the other world."†

The religion of the aboriginal nations partook of the same primitive character as that of Egypt. The traits of resemblance were the recognition of the existence of a Supreme Being, the neglect of his worship for a debased idolatry, the belief in divine emanations, the doctrine of a divine triad, the worship of the elements, of the celestial bodies,‡ and of animals, the practising of fasts, ablutions, and expiatory punishments in preparation for sacred festivals, the association of a female with some of the principal male deities, human sacrifices, astrological and magical divination, and the belief in the metempsychosis, and the immortality of the soul. Some of the animals sacred in America were also worshipped in Egypt, as the dog, the serpent, the eagle, the owl, the tortoise, and the wolf.§ As in the Egyptian mythology, Osiris stands opposed to Typhon,

* Pritchard, p. 126.

† Clavig., vol. i. p. 325.

‡ The Pharaohs had the same name as the Peruvian Incas—"Children of the Sun."

§ Denon, vol. ii. p. 71. Garcillasso de la Vega, vol. i. p. 72. Pritchard, pp. 292, 295, 390. Herod., l. i. c. 6.

the one representing the creative and the other the destroying power, Quetzalcoatl and Tezcatlipoca take precisely the same place in the Mexican mythology. Osiris was the instructor of mankind, and taught them agriculture and other useful arts,—the same office was assigned to Quetzalcoatl. Osiris travelled for the purpose of reclaiming foreign nations from barbarism, and it was in the midst of a banquet on his return, that Typhon laid a stratagem for his destruction. Tezcatlipoca desiring to drive away Quetzalcoatl, offered him a beverage which immediately inspired him with the desire to set out for the imaginary country of Tlapalla, and on his journey he suddenly disappeared upon the shores of the Gulf of Mexico.* On the other hand a similar parallel may be drawn between Isis and the Mexican goddess, Centeotl. Isis taught the cultivation of corn, and represented the *earth* and the passive productive powers of nature. Centeotl was “goddess of the earth and of corn,”† and typified the fertility of nature; Isis was called “mistress” and “mother,” and was the first of the goddesses, and Centeotl was denominated Tonantzin, “our mother,” and Teteoinan, “the mother of the gods.” Without entering into details, it may be added, that the same *impure* worship which appears to have been produced by a recognition of these principles in the Egyptian religion, seems to have existed also in America. Humboldt thought otherwise; but the recent discovery of some ancient idols in the western part of the United States, and the sculptures at Uxmal described by Waldeck, set this question at rest: at the same time it must be admitted that these rites were not extensively prevalent.

* Clavig., vol. i. p. 248.

† Ibid., p. 253.

Quetzalcoatl in some of his attributes, presents also some remarkable analogies to the Egyptian Thoth or Hermes. The former was called "green feathered serpent," and "the god of the air," was supposed to have the most profound wisdom, and introduced the knowledge of melting metals and of cutting gems, established wise laws, the rites and ceremonies of religion, and the arrangement of the seasons and the calendar;* he was also said "*to clear the way for the god of water.*" Hermes taught the arts and sciences, sculpture and astronomy, and imparted the institution of religion; he was identical also with Sirius, "*the star which served as the precursor of the inundation of the Nile.*"† The Egyptians regarded the *heart* as the seat of the intellect, and hence the Ibis, which from its form was symbolical of the heart, was sacred to Hermes as the god of wisdom.‡ "The Cholulans," says Clavigero, "preserved with the highest veneration, some small green stones very well cut, which they said had belonged to Quetzalcoatl." These stones were sacred to that deity; and their signification appears from another passage from the same author in his description of the Mexican funeral rites. "After burning the body, they gather the ashes in an earthen pot, amongst which, according to the circumstances of the deceased, they put a gem of more or less value, which they said would serve him in place of a *heart* in the other world." And again, "they hung an emerald at the under lip, which was to serve in place of a *heart.*" * * "Emeralds were so common that no lord or noble wanted them, and none of them died, without having one fixed to his lip, that it might

* Clavig., vol. i. p. 249.

† Anthon's Class. Dict., article Mercurius.

‡ Pritchard, p. 129.

serve him, as they imagined, instead of a heart." The two small pyramids of *challa*, with the figure of a heart engraven upon them, discovered by Del Rio at Palenque, were probably symbolical of the same idea.

There are remains of causeways or roads in Egypt, which may compare with those in America;* the art of irrigation was practised on the same extensive scale, and many of the Egyptian cities were surrounded by earthen embankments for the purpose of protection against inundations,† which appears also to have been the object of many of the mural remains in the United States.

The Hermaic books preserved in the Egyptian temples, like those of the Aztecs, contained the outlines of their astrology, astronomy, their rituals, the histories of their mythology, and indeed all that was known of the arts and sciences, which were in the possession of the priests alone. The Mexican manuscript painting possessed many of the attributes of real hieroglyphical writing. It did not consist merely of mimetic images, such as are often found on the Egyptian tombs, but it was fettered by prescribed forms; nearly all its elements had a fixed meaning, and had thus become, to an extent, conventional signs. Some of these signs unquestionably possessed an arbitrary signification, such as those which indicated numbers and the elements. The numbers to twenty‡ were represented by dots or points, twenty by a flag, four hundred by a feather; day, night, midnight, the year, the century, the heavens, air, earth and wa-

* Denon, vol. ii. p. 147.

† Wilkinson, vol. i. p. 103. Herod., ii. 113.

‡ There is reason to suspect that the number ten was indicated by a straight line.

ter were all denoted by symbolical characters. The figures for the names of cities, and the astronomical representations of the names of the months were also real symbols, which suggested the sounds of those names, upon being seen. Indeed the usual picture-writing of the Mexicans resembles that found upon the clothing of the Egyptian mummies, and was of a mixed character. But beyond all this, there are traces of real phonetic hieroglyphics in those signs which appear upon the monuments above the heads of the gods, which, like the Egyptian hieroglyphics of the names of the gods, were enclosed in an oblong rectangle.* The characters in the *Codex Mexicanus* at Dresden, suggest the existence of even a complete system of phonetic hieroglyphics. There could be no doubt on this point, if there were not some reason to suppose that they have an astronomical signification; but even in that case, they still present the appearance of real cursive characters; for, upon analyzing the groups of figures, we find the same elements often repeated in different combinations. The state of our knowledge, however, upon this subject, renders it impossible to decide this interesting question; to arrive at a positive conclusion it needs that the picture-writings, now so extensively scattered over Europe, should be brought together and be carefully scrutinized and compared, that the monuments themselves should be examined with direct reference to this inquiry; and it is yet possible, with the means still remaining for acquiring a knowledge of the Aztec, Toltec, and Maya dialects, that these characters may be deciphered, and that a new flood of light may be shed upon the social and religious history of those nations. The monu-

* Heeren's *Res.*, vol. ii. p. 9. See an able article on Mexican Antiquities, in *For. Qr. Rev.*, No. 35.

ments and paintings are loaded with symbolic figures, few of which have yet been interpreted; and it is apparent they are explanatory of the actions, scenes, rites and ceremonies which they accompany. Whether they be real hieroglyphics or not is of comparatively little importance; for it is clear they afford the only key to unlock the recondite meaning of these symbolic representations.

The Mexican and Egyptian priests were recluses,* and lived in apartments within or adjoining the temples; and those stone benches which have been observed at Palenque, and whereon it is supposed the priests were accustomed to sleep, are similar to the stone couches which appear in the apartments of the priests in the Egyptian temples.

Many of the Toltec, Aztec and Maya sculptures are similar in style to the Egyptian. The *calantica* or veil upon the statue of an Aztec priestess, described by Humboldt, resembles some of the statuary head-dresses in Egypt,† and particularly those of Isis and Osiris: the artificial form of the fluted ear-tress is clearly Egyptian. The beautifully executed *Caryatides* at Uxmal with caps on their heads, the arms crossed, and some instrument in one hand, resemble the Egyptian *Caryatides* seen by Denon, and the figures observed by Richardson and Henniker at Karnac and Ebsambal, which like those of Osiris at the Memnonium have their arms crossed upon their breast, holding in one hand a *tau*,‡ and in the other a flagellum.§ Mexican and

* Bryant's Mythology, vol. iv. p. 278.

† Researches, vol. i. p. 45.

‡ According to Waldeck, one of the figures in the "temple of the Serpents," at Uxmal, is represented with the *tau* on the breast.—*Voyage Pittoresque*, p. 104.

§ Henniker, p. 160. Denon, vol. ii. p. 166.

Egyptian statuary accords in another particular; the human figure is seldom left free, but the back is generally attached to a mass of stone or imbedded in walls; and where the stone is a single detached block, the back is often covered with hieroglyphics.* The Egyptians are sometimes represented as sitting cross-legged or crouched† (in the Indian fashion), and this position is common in the Mexican figures; the principal god at Palenque is seated cross-legged upon a couch, with the head of a tiger rising from each end, similar to the tiger-shaped Egyptian couch. The Mexican sculptures appear to be fully equal to the Egyptian in elegance, execution, and precision of outline. Upon the monuments of both people are abundant indications of that patient, untiring labor, which was essential to the accomplishment of minute precision in the execution of numerous hieroglyphical figures, and rich and complicated ornaments, most of which, from their religious character, were to be finished to the most scrupulous degree of exactness.‡ No scope was allowed to the genius of the artist; the principal forms were settled and prescribed, and his ingenuity, if not wholly repressed, was restricted to the invention of inferior ornaments, which, though they increased the richness of the sculpture, did not infringe upon their conventional rules.

There is some similarity in the costume of the figures *painted* on the Egyptian monuments, to that of the Mexicans. The apron was in some respects alike; in front was something re-

* Egyptian Antiquities, Lib. Ent. Knowledge, vol. ii. pp. 7, 16.

† Wilkinson, vol. i. pp. 191, 204. When bearing sacred emblems before the shrine of a deity, or desirous of showing respect to a superior, they generally sat upon their heels.

‡ Denon, vol. iii. p. 7.

sembling a streamer, descending from the girdle or the middle,* and behind often appears the representation of the tail of an animal; in other respects, however, the Mexican apron was peculiar. The Mexicant† figures frequently wear upon the breast a medal with the representation of a human head, and the same may be often observed in the Egyptian paintings and sculptures. In the paintings of both people may be perceived the figures of captives dragged along by the victor, by the hair, and dressed in skins.‡ The Mexican paintings in the temples, like the Egyptian anaglyphs, are arranged in compartments or divisions,§ each of which seems to be complete of itself, and to have an allegorical or symbolic meaning; and the colors appear often to have been applied according to some conventional rule. The human figures are not portraits, but are drawn after certain fixed forms; and though the statues are usually represented with the full face, the paintings are generally in outline or profile.

Other points of similitude between the Egyptians and the nations of New Spain are indicated in the custom of tattooing; the use of masks by the priests in religious ceremonies;|| the sacred character of the *lotus*; the practice of shaving the head,¶ or the tonsure, which though not usual in Mexico was common

* Wilkinson, vol. i. p. 406.

† Though the term *Merican* has been employed for the sake of brevity, in the course of the argument, the comparison is intended to apply to all the cultivated nations comprised within the limits of the former kingdom of New Spain.

‡ Egyptian Antiquities, vol. i. p. 394. Denon, vol. iii. p. 12. Burckhardt, pp. 109, 83. Belzoni, vol. i. p. 127.

§ Drummond's *Origines*, vol. ii. p. 291.

|| Heeren's *Res.*, vol. ii. p. 296. ¶ Herodotus, ii. 36; iii. 12.

in other parts of America ; the resemblance of the Mexican and ancient Egyptian flute, each having but four holes, and their use in sacred services ;* the similar methods of manufacturing paper, in one case from the papyrus, and in the other from the agave ; the religious use of mirrors ; the dramatic entertainments and buffooneries ; the religious dances in the temples ; the occasional employment of women in sacred offices ; the existence of an *Ophite* worship ; the practice of sculpture painting ; the beads, necklaces, bracelets, anklets, the sandals, conical caps, head-dresses of feathers, with which the human figures are represented ; the nearly identical form of the Mexican and Egyptian granaries ;† and in the Cyclopean arches, the obelisks, planispheres and pyramids. In opposition to all these analogies, however, there are great and striking differences in the arts, customs, institutions, and in architecture, which forbid the conclusion that the American nations were of Egyptian origin.

India. Passing from Egypt into a country whose civilization was of a kindred character, India, we discover still closer affinities in religion and institutions to those of the cultivated nations of America. In the Hindoo religion may be traced the same vestiges of a purer and higher belief in ancient times ; of its gradual modification under the doctrine of emanations, and under the personification of the productive and destroying powers of nature ; and its ultimate debasement into the most horrid superstitions. The clear and definite language in which the faith of the Hindoos in the existence of the Supreme Being is expressed in their works of authority, has been shown.‡ The

* Wilkinson, vol. i. p. 364.

† Ibid., vol. i. p. 135.

‡ As in America the Creator was not worshipped. In all Hindoostan but one temple has been erected to the true God, and that contains no idol.

great and characterizing feature of Sabaism,—the worship of the Sun and moon and other heavenly bodies—next appears. At Benares there still remain several temples, upon the altars of which a perpetual fire is preserved like that maintained on the Mexican Teocalli, and in the temples of Vesta. The holiest text of the Vedas is addressed to the Sun : “ Let us meditate on the adorable light of the Divine Ruler : may it guide our intellects.” The Brahmins still pray to that luminary,* and it is often confounded, as an object of adoration, with the gods of the Trimurti, and even with the Supreme Soul. The worship of the stars, the moon, the signs of the zodiac, was and is equally prevalent ; and as the study of astronomy was confined to the priests, a most extensive system of astrology arose, so that even to this day the Astrologer is one of the regular public officers in the Hindoo towns ; and as in Mexico, not only are the fortunes of mortals decided by sidereal influences, but few important enterprises are undertaken, without first consulting the aspect of those bodies. The worship of evil spirits, though now discountenanced by the Brahmins, appears to have been one of the traits of the most ancient religion,† and even those priests, in cases of sickness, attempt to conciliate these malignant deities. In some portions of India the greater part of the inhabitants have no other worship, and, as with our aboriginal nations, “ every house and each family has its own particular *Bhuta*, who stands for its tutelary god ; and to whom daily prayers, and propitiatory sacrifices are offered, not only to incline him to withhold his own machinations, but to defend them from the evils which the Bhutas of their neighbors or enemies might in-

* Asiatic Res., vol. v. p. 354. Mill's India, vol. ii. pp. 145, 334.

† Ward, vol. i. p. 73.

flict. In those parts, the image of the demon is everywhere seen represented in a hideous form, and often by a shapeless stone." Thus we find in India and America the same prominent features in the prevalent religion, but on examining the Hindoo mythology, there are more decided traces of connection. In Mexico, after the Supreme Being, the god Tezcatlipoca was the most venerated. His name signified "shining mirror," and his principal image was of a black shining stone—Teotletl—Divine stone. He was represented as black, and as sitting upon a bench covered with a red cloth, skulls, and the bones of the dead. As a general analogy has already been indicated between this deity and the Egyptian Typhon, so, on the other hand, he presents a not less striking resemblance to the Hindoo Siva, the representative of the destructive powers of the universe. Tezcatlipoca was always represented young, as being superior to the effects of time, and Siva when worshipped as Maha Kala, or "Time, the Great Destroyer," is represented as "a smoke-colored youth, with three eyes, clothed in red garments, with a chaplet of human skulls about his neck,"* and Parvati or Kali his goddess is also figured with a black face, with a chaplet of skulls, and with a *mirror* in her hand. Black marble was also the symbol of Siva, and is found under the form of the Lingam, or otherwise, in most of the Pagodas dedicated to him. The former prevalence of human sacrifices in Hindoostan is beyond question, and probably to no deities were these made more frequently than to Siva and Kali.† To the Mexican Tez-

* Lib. Ent. Know., Hindoos, vol. i. p. 168. Mod. Trav. India, vol. viii. pp. 265, 266; vol. vi. p. 167. Mill's India, vol. i. p. 337.

† Bombay Trans., vol. iii. pp. 86, 89. Heber, vol. ii. pp. 415, 420; vol. iii. pp. 261, 264.

catlipoca also, the same revolting sacrifices were offered, particularly at the great festival in the month of May, when the head of the victim was strung up on the Tzompantli, with the rest of the skulls of victims. The Hindoos appear to have been divided for many ages into sects, each of which exhibited a preference for one of the Trimurti, Brahma, Vishnoo or Siva.* "This contention for pre-eminence ended in the (nearly) total suppression of the worship of Brahma, and the temporary submission of Vishnoo to the superiority of Siva." The controversy was not merely a contest for an arbitrary preference, but involved a principle. Siva representing the destroying, and Vishnoo the preserving power of nature, the sacrifices to each were appropriate; the one was conciliated only by blood, the other by offerings of fruits and flowers. Accordingly, in the ninth *avatar* or incarnation of Vishnoo, he came as the Reformer, Buddha, proscribing the sacrifice of animals; and a fierce contest ensued between the two sects, which finally ended in the triumph of that of Siva. A parallel is afforded in that part of the Mexican mythology under consideration. Quetzalcoatl was a benevolent being, averse to cruelty, and to any other sacred offerings than the vegetable productions of the earth. The rites attending the worship of Tezcatlipoca were inhuman and bloody, and a further proof of his attributes is afforded in his intimate connection with Mexitli, the Mexican god of war, to whom were offered more human victims than to any other of the gods: indeed the great Teocalli of Mexico was dedicated to Tezcatlipoca and Mexitli in conjunction. This explains the

* Asiatic Res., vol. viii. p. 45, 46. Mod. Trav. India, vol. viii. p. 305.

ceremony usual at the third and principal festival of Mexitli. At its conclusion his statue, formed of seeds pasted together with the blood of children, was carried to a hall in the temple, where in the presence only of a few persons of rank, the priest called *Quetzalcoatl* threw a dart at the statue, which pierced it, and they then exclaimed, the god was dead. The opposition between the two deities could not be more clearly expressed; and this ceremony was probably commemorative of a period when the mild and peaceful triumphed over the sanguinary worship. A subsequent revolution seems to have occurred, at least among the Aztecs, and accordingly, Tezcatlipoca, the Destroyer, procures by a stratagem the absence of the benign Quetzalcoatl. It is to be observed that in Peru, also, the human sacrifices which were customary in the first ages, were forbidden by the Incas. The Muyscas represented Bochica with three heads; Del Rio found in the corridor of a building at Palenque three crowned human heads cut in stone, connected together behind; the Triune vessel discovered in one of the mounds in the United States, represents three human heads joined together in the same manner. These facts tend to support the authority of those Spanish historians, so flatly contradicted by Vega and Blas Valera, who maintained that the Peruvians and the nations of New Spain worshipped a Triune deity. They may be considered as establishing another link of connection with Hindoostan, where Brahma, Vishnoo and Siva, forming what is called the Trimurti, or the three powers, the Creative, Preserving and Destroying, are sometimes represented as of one body with three heads.

The Mexican Tlaloc was the god of water, and it has

* Del Rio, p. 56.

been shown that this element was considered as of a sacred character by the Mexicans, Peruvians, and the ancient inhabitants of the United States. Its sanctity in India is well known; but one custom recently existing is remarkable as being similar to that which was practised by the Mexicans and Etrurians. It consisted in the sacrifice, annually, of a youth and maiden richly dressed, by drowning them in their sacred river.* To the lakes of Titicaca and Guatavita in South America, it was customary for the natives to make pilgrimages, and in the latter, offerings of great value were thrown. These were strictly analogous to the Hindoo pilgrimages to their sacred streams. In the Hindoo temples are tanks of water, surrounded by colonnades and steps, whither the pilgrims descended to employ themselves in ablutions and religious contemplations.† Tanks precisely similar may be observed in the ruins of Zacatecas in Mexico. The lotus, which it has been remarked, was sacred in Egypt and America, was also a religious emblem in India, Thibet and China.‡

The belief in the transmigration of souls was common to some of the American and to the Hindoo nations; animal worship was probably connected with it. This superstition prevailed in Peru, before the time of the Incas; and its existence in New Spain is proved by the representations in the sculptures and paintings. In these the serpent occupies a prominent place, and whatever may have been its original signification, there can be no doubt of the prevalence of an *Ophite* worship. The Mexicans erected chapels to the tiger, the eagle and the serpent.

* Mod. Trav. India, vol. vii. p. 59.

† Heeren's Res., vol. iii. p. 81.

‡ Asiatic Tracts, vol. i. p. 34.

In 1791, a tomb containing the skeleton of a wolf was discovered in the city of Mexico; the bones were carefully deposited in a stone coffin, together with clay vases and metallic vessels.* And it would appear that other sepulchres have been opened, containing the skeletons of the mammoth or of some other large animal, which appeared to have been expressly fitted for their reception.† In the different provinces of Peru, and also at Cuzco there were large collections of animals, the different species of which were kept separate, and which were attended to with the greatest care.‡ In the city of Mexico were two large houses appropriated as the habitations of animals, one for those who did not live by prey, and the other for birds of prey, quadrupeds, and reptiles. It is common to find in India hospitals, where many animals of various kinds are collected. In the city of Surat there is one for the sick, wounded, and maimed animals, divided into parts for different species, which are all attended with the greatest care. It will be remembered that Surat is one of the most ancient cities in Hindoostan. Mathura, celebrated as the birth-place of Krishna, has a hospital for monkeys.—The city of Ahmedabad formerly contained three several hospitals; there is another at Baruach, containing not only sacred animals, but cats, dogs and horses. The Mongols appear to have had similar collections.§

The Mexicans, Peruvians, Chinese, and Hindoos, all possessed a taste for dramatic entertainments; these were often of

* Hum. Res., vol. ii. p. 48.

† Clavigero, vol. i. p. 84. This author considers them to be the bones of giants.

‡ Vega, vol. i. p. 235.

§ Maundeville, ch. 22. Marco Polo, ch. 56.

a poetical cast, though sometimes they consisted of mere buffoonery. The manners and customs of social life in Hindoostan, Mexico and Peru, partook of a religious character. Nothing of consequence could be done without the intervention of the priests. They were present at births, marriages, and funerals; the most trifling affairs were transacted according to certain religious forms, and the national mind seems to have been completely subjected in private, as well as in public matters, to the domination of the sacred orders. The monarchs were despots, religion combined with power to render their sway absolute, and they were almost worshipped as demi-gods. In Mexico and Peru the Emperor was the great proprietor of the soil, and it was necessary every year for the landholders to have their titles renewed by a particular form of investiture. But for important services, an exception was made, and allodial estates, with a power of alienation, were granted. The general rule and particular exception just noticed prevailed also in India. In both countries, the rents and taxes were received in kind, even down to the productions of the artisans.*

Among many American tribes, a peculiar method of regulating lineal descent existed. It consisted in tracing the line through the mother. A mode precisely similar prevails through the whole southern part of Hindoostan. Other analogous customs may be traced between the Americans and Hindoos; but a coincidence in the form of the marriage ceremonies is too singular to be omitted.—The matrimonial contract in Mexico† chiefly consisted in the priest's tying a point of the gown of the

* Mill's India, vol. i. p. 261. Clavig., vol. i. p. 348.

† Clavigero, vol. i. p. 321.

bride, with the mantle of the bridegroom. The wife then passed several times around a fire, which was kindled, and sat down on a mat with her husband, and offered copal to the gods. The married pair then lived austerely, slept on mats, and remained the three succeeding days in the same chamber. In India "the father of the bride ties a knot with the skirts of the mantles of the bridegroom and bride, saying 'ye must be inseparably united in matters of duty, wealth, and love.'" This and some other ceremonies being performed, "the bride goes to the western side of the fire, and recites a prayer while she steps on a mat made of virana grass, and covered with silk. She then sits down on the edge of the mat, and the bridegroom makes six oblations of clarified butter, reciting a prayer with each." "During the three subsequent days, the married couple must remain in the house of the father of the bride, and must live chastely and austerely, sleeping on the ground."*

Within the mounds of the United States, and those of Peru, numerous marine shells have been found deposited with the dead; and in Mexico there was a "temple of shells." Several of the *Murex*, discovered in an ancient work near Lexington, Kentucky, are of the same species as is sacred to the Hindoo Neptune, Mahadeva. But more singular still, some of those disinterred from the mounds are of a kind unknown on the shores of this continent; of the *Pyrula perversa*, none have been found here except those of a very inferior size, while two very large ones have been taken from the ancient remains. They abound, however, in Hindoostan, where they are used in religious ceremonies. The *Cassis Cornutus* of the Cincinnati

* Mill, vol. i. p. 446.

tumulus is an Asiatic shell also.* In Chin-India, the Buddhists also employ shells for religious purposes (particularly the conch, and left-handed shells), and upon the most solemn occasions, when they are filled with holy water. In India the shell is sacred to the Moon, and the shell, the ring and the lotus are the insignia of the gods.†

The ancient Hindoo cities, as they are described in the Gentoo Code, were similar in form to some of the ancient enclosures of the United States; and they were surrounded by ditches or earthen embankments, with a covered way proceeding from one of the sides. One of the methods of fortification, is identical in character, with that of one of the fortifications in Florida. It consists of a wide ditch around the town, certain intervals being left unexcavated as causeways or entrances.‡

"Let not the piety of the Catholic Christian," says the Rev. Mr. Maurice, "be offended at the preceding assertion, that the cross was one of the most usual symbols among the hieroglyphics of Egypt and India. Equally honored in the Gentile and Christian world, this emblem of universal nature, of that world to whose four quarters its diverging radii pointed, decorated the hands of most of the sculptured images in the former country, and in the latter, stamped its form upon the most majestic of the shrines of their deities."§ The early Christian fathers were aware of the sanctity of this emblem among pagan nations, and archæological researches have also shown most clearly its anti-

* Delafield's Inquiry, p. 62. Nuttall, p. 22. Crawford's Siam, vol. i. p. 277.

† Asiatic Tracts, vol. i. p. 45.

‡ Gentoo Code, c. 14. Mill's India, vol. i. p. 181. Dubois, p. 543.

§ Maurice's Indian Antiquities, vol. ii. p. 361.

quity and sacred character. It not only appears upon many of the ancient Celtic monuments of the British Isles, but some of the Celtic or Druidical temples were built in this form. This is the case with the great temple at Classerniss, in one of the islands of the Hebrides, and with the gallery and cemetery beneath the mound at New Grange in Ireland.*

In Italy the staff of the Roman Augurs was surmounted by a cross, and the cross appears upon one of the bas reliefs at Pompeii in connection with ancient symbols, and the figures of heathen gods. Venus is represented by a cross† and circle, and Saturn; with a cross and horn. A silver medal found at Citium, in Cyprus, which appears to have been older than the foundation of the Macedonian empire, exhibits on one side, within an indented square, a rosary or circle of beads to which a cross is attached.‡ “Of these rosaries, and this appendage, as symbols (explained by converted heathens at the destruction of the temple of Serapis”), says Dr. Clarke, “having in a former publication been explicit, it is not now necessary to expatiate. That the soul’s immortality was alluded to, is a fact capable of the strictest demonstration.” In Egypt, the crosier of Osiris is surmounted by the cross, or the sacred *tau*, and the *Cruz ansata* is a common symbol in the hands of sacred figures. Some of the

* O’Brien on the round towers of Ireland, *passim*. Higgins’ Celtic Druids, p. 57, and authorities there quoted. Davies’ Celtic Researches, p. 143.

† Landseer, p. 360.

‡ Clarke’s Travels, vol. ii. p. 180. Pococke, vol. ii. p. 213. At the destruction of the temple of Serapis, at Alexandria, alluded to by Dr. Clarke, the same symbols were discovered beneath the foundation.

human figures painted upon the walls of one of the tombs at Thebes, opened by Belzoni, are *tattooed* on their thighs and arms with the form of the cross.* And that the first Christians were aware of the sanctity of this emblem with the Egyptians, appears from one of the excavations near Edfou, on the west bank of the Nile. The figure of the cross is there seen painted on a wall with the inscription over it,—“The Cross of the Christians.” Sir Archibald Edmonstone, who observed it also in some buildings of unburnt brick in the Thebaic Oasis, remarks, “In all we entered, there is the Greek cross, and the celebrated Egyptian hieroglyphic, the *Crux ansata*, which, originally signifying life, would appear to have been adopted as a Christian emblem, either from its similarity to the shape of the cross, or from its being considered as the symbol of a state of future existence.”† Mr. Richardson, speaking of the handled cross of Osiris, observes: “I am disposed to consider it as the *Sigma Thau* mentioned in the Vulgate, in the ninth chapter of Ezekiel, and represented there as being the sign of life and salvation to those who received it.”

In Hindoostan and those parts of Asia, whose religious systems have been thence derived, the cross is of high antiquity and of a sacred character. One of the principal caves of Elephanta is excavated precisely upon this plan; it is also recognised over the heads of some of the sculptures within; and the pagodas of Benares and Mathura are built after the same form.‡ The Hindoos frequently wear the cross appended to a rosary, and the rosaries are doubtless of very ancient use in Oriental

* Richardson, vol. ii. p. 75. † Edmonstone's Journey, p. 109.

‡ Maurice's Ind. Antiq., vol. ii. p. 361. Mod. Trav. India, vol. viii. p. 267.

Asia. Brahma is often represented as holding one in his hands; the devotions of the ascetics are still made, by telling their beads; and the rosary is to be observed even in Thibet and China.* The same symbol is recognised as sacred by the Mongols: "It is remarkable that the high priest of the Tartars bears the name of Lama, which in the Tartar language, signifies the cross, and the Tartars of Bogdo, who conquered China in 1644, and who are subject to the Delae-Lama in all matters of religion, carry with them crosses, which they also call Lamas."† It appears also to have been known in some of the islands of the Pacific, for the inhabitants of the Gambier islands *tattooed* themselves with the figure of the cross; and when Lord Mulgrave's island was discovered, the natives wore necklaces with crosses suspended.‡ Upon the breast of a skeleton disinterred from one of the ancient mounds in the United States, were found a copper cross and necklace of beads. Cordova and Grijalva in their first voyages to Yucatan, observed large crosses of stone and wood, some of them painted, which were worshipped by the Indians. The Itzaexes, a Yucantanese nation, had a most singular method of punishment. They enclosed the victim in a metallic cross, which was heated until he had expired.§ Upon examining the monuments, we find that the subterranean apartments of the temple, or palace of Mitlan, are cruciform, like the cave at Elephanta. The cross appears in the sculptures at Uxmal, and one of the human figures is evidently telling his beads. The windows at Palenque are

* Ward, pp. 40, 45, 422, 427.

† Voyage de la Chine, par Avril, p. 194, in Higgins, p. 312.

‡ Mavor, vol. ix. p. 159. Beechey's Nar., p. 126.

§ Waldeck, p. 24. See Herod., 4, 42, 43.

in the same shape ; it appears frequently in the paintings at that place, and one of the most remarkable religious representations on its walls is a large and richly ornamented cross, placed upon a pedestal, and surmounted by a sacred bird, before which priests are making their adorations. "The crosses the most celebrated," says Clavigero, "are those of Yucatan, of Mizteca, Queretaro, Tepique, and Tianquiztepec." These curious relics did not escape the attention of the Spanish missionaries, but they ascribed them to St. Thomas. That they were not of recent introduction appears from their connection with the oldest religious fables. The garments of Quetzalcoatl were covered with red crosses, and the Yucatanese worshipped the cross in obedience to the commands of their great prophet Chilam-Cambal.* The sign of the cross had been for many ages venerated by the Peruvians. A cross was placed on the summit of the Temple of the Sun at Cuzco, and within a sacred mansion in the same city there was one composed of fine marble. Although it was not worshipped, says Vega, it was still held in great veneration.† The Patagonians *tattoo* their foreheads with the figure of the cross, and it has been thought by recent travellers that the employment of this particular form was derived from the Spaniards,‡ but this conjecture is erroneous. One of the best of authorities, Martin Dobrizhoffer, says, "what these signify and what they portend I cannot tell, and the Abipones themselves are no better informed on the subject. They only know that this custom *was handed down to them from their ancestors*, and that is sufficient." He adds, "I saw not only a

* Clavigero, vol. i. p. 250.

† Vega, vol. i. p. 63 ; vol. ii. pp. 467, 468.

‡ King and Fitzroy, vol. i. p. 90.

cross marked on the foreheads of all the Abipones, but likewise black crosses woven in the red woollen garments of many. It is a very surprising circumstance that they did this *before* they were acquainted with the religion of Christ, when the signification and merits of the cross were unknown to them.”* Thus it appears that the ancient use of this sacred symbol may be traced from India, on the one hand into Egypt and the Druidical countries, and on the other into America, and in every case it seems to have possessed a religious signification or character.

At Barkal in Egypt there is the figure of a foot sculptured in black granite. Herodotus in his description of Scythia speaks of “an impression which they show of the foot of Hercules (the Sun). This is upon a rock,” he says, “two cubits in size, but resembling the footstep of a man; it is near the river Tyras.”† Upon the summit of Adam’s Peak, in the island of Ceylon, is the impression of a foot, said to be that of Buddha when he first landed on the island; this is held in the highest veneration by the natives. At many places in Ava are impressions of Gaudma’s or Buddha’s foot upon flat rocks, which are believed to have been made by that god, at his descent upon the earth.‡ The Siamese are accustomed to make pilgrimages to those sacred places where the alleged footmarks of Gaudma (Prahbat—“the holy foot”) are found.§ The votaries of Rama in India impress upon different parts of their body the figure of Rama’s foot;|| and in the Puranas, Sravanna is described as “on the white mountains meditating upon the traces of the

* Dobrizhoffer, vol. ii. p. 20.

† Melpomene, c. 82.

‡ Symmes’ Embassy, p. 240.

§ Crawford’s Siam, p. 79.

|| Mod. Trav. India, vol. vii. p. 317.

divine feet." It will be remembered that one of the signs of the Hindoo lunar zodiac, the Nacshatras, or Houses of the Moon, is termed the *Sravanna*, and represents the three prints of the feet of Vishnoo.* Buddha was one of the incarnations of Vishnoo, and Vishnoo was identical with the Sun. But the zodiacal sign *Sravanna* is the same as the Mexican sign *Olin Tonatiuh*, or motion of the Sun, which was also denoted by the prints of three feet: thus the coincidence between the Hindoo and Mexican signs is complete. But this ancient myth was of still wider prevalence in America. Payzome, the Buddha of Brazil, when he departed left his footsteps imprinted upon the shore; in Chile we find the figures of human feet engraved upon the rocks; at St. Louis in the United States was a tabular mass of limestone with the same impressions; they have been recently discovered at Zacatecas in Mexico among the ancient ruins, and Clavigero says they have been frequently observed throughout that country.†

In conclusion, the Mexicans, Peruvians, and Hindoos, offered sacred cakes of flour to their deities; the feats of Mexican jugglery were equally surprising as those still practised in India; masks were worn by the priests in Egypt, America, and India, in their religious ceremonies; the mask or figure of the Sun on the monuments and paintings of New Spain, is almost identical in appearance with the Hindoo *Kala*, time, "who swallows the world, opening a fiery mouth, exhibiting a row of dreadful teeth, and protruding an enormous tongue;" the position and figures of the American idols, are often similar to those

* Vide page 324.

† The Spaniards ascribed these to St. Thomas.

of the Hindoos ; and the Hindoo artificial lakes approached by avenues of trees resemble those the remains of which have been observed here. The custom of shaving the head with the exception of a single lock ; that of tattooing, which has not yet been wholly abandoned in India ; the appearance of hieroglyphic and emblematic sculptures and paintings in the Hindoo temples and caves ; the stone benches or couches in the dormitories of the temples ; the conical caps of the figures on the walls of Elephanta ; the frequent position of the Hindoo temples upon elevated terraces ; some traces of the institution of castes in America ; and the general resemblance of their religious belief, ceremonies, superstitions and traditions, present many decided analogies, which despite numerous points of difference in other respects, tend to indicate the ancient connection of the American nations with South-Eastern Asia.*

The Mongols. Siberian Asia is occupied by two great races, the Tartars and Mongols ; the principal territory of the Mongols lies to the north, and that of the Tartars to the south of the Sir

* Waldeck, p. 19. Heeren, vol. iii. p. 81. Mod. Trav. India, vol. viii. pp. 267, 364, 175. Carli, Lettres sur L'Amerique, lett. 13.

One of the Hindoo traditions resembles that in which Bochica figures, among the Muyscas. According to the Hindoo tradition, the valley of Cashmere was formerly a large lake. Casyapa, a grandson of Brahma, drained its waters by opening a passage through the mountains near Baramauleh, through which the waters escaped. He then peopled the restored territory with the assistance of the gods. See *Asiatic Res.*, vol. vi. p. 455. "The Piragua now used at Chiloe, and by the savages of the Chonos Archipelago, exactly resembles, in every minute detail, the Maseulah boat of Madras."—*King and Fitzroy*, note, vol. ii. p. 648.

or Sihon.* Though at present composed mostly of nomadic and barbarous tribes, the Mongols seem to have been in ancient times far more civilized; and nations of the same family now occupy the vast region extending along the ocean from India to the highest northern latitudes. The ancient Scythians appear to have been a branch of the same race. There are yet to be found in Siberia indications that these rude tribes were formerly more cultivated than at present. It is said that the Tartar and Mongol writings extant are of a date long subsequent to the time of Mohammed, and that none of these nations had formerly any written memorials.† Be this as it may, in many parts of Siberia there are characters and figures engraven or painted upon stones and rocks, some of which appear to be in the nature of letters, and others hieroglyphical emblems, and the figures of animals; they are usually painted red. Some of these remind us of the ancient inscriptions in America, for they are cut upon the face of perpendicular rocks on the banks of rivers, at great heights which appear inaccessible. Others according to Kircher, as referred to by Strahlenburgh, resemble the ancient Chinese characters. The same author describes ancient idols and obelisks, cut out of large blocks of stone, from seven to nine feet high, with hieroglyphic figures sculptured *on their backs*. His description of the tumuli should be quoted in his own words. "Vast numbers are found in Siberia, and in the deserts which border on that government

* Heeren's Res., vol. i. p. 11. Bell's Journey, p. 464. Tooke's View, vol. ii. p. 35.

† Asiatic Tracts, vol. i. pp. 149, 155. The Mongolian manuscripts are written on a thick paper, covered with a colored varnish. They are found in the tombs and temples.

southwards. In these tombs are found all sorts of vessels, urns, wearing-apparel, ornaments and trinkets, cimeters, daggers, horse-trappings, knives, all sorts of little idols, medals of gold and silver, chess-boards and chess-men of gold, as also large golden plates, on which the dead bodies have been laid.* The graves of the poorer class have likewise such things in them, of copper and brass, arrows of copper and iron, stirrups, large and small polished plates of metal, or mirrors, with characters upon them; earthen urns of different sizes, some almost two feet high, others more, some with and some without handles. * *

* As to the graves themselves, they are of different structures, some are only raised up of earth, as high as houses, and placed so near together and in such numbers on the spacious plains, that at a distance they appear like a ridge of hills. Others are set round with rough hewn stones, and some with square free stones, and are either of an oblong or a triangular form. *In some places these tombs are entirely built of stone.* Hence we find in the ancient maps of Tartary the greater, *a number of pyramids*, with these words, in Latin, *the pyramidal sepulchres of the Tartarian kings*, by which they must needs mean their monuments, though they are not so properly pyramids." Traces also of mural remains similar to those of the United States exist in some parts of this region.†

Shamanism, the religion of the Mongols, is based on the same idea as, and is similar in its developments to, those ancient

* The mines of silver and gold were worked by the ancient inhabitants.

† Strahlenburgh, pp. 364, 324, 429, et seq. *Hist. Kamtschatka*, p. 16. Malte Brun, book 38.

cults which have been considered. The existence of the Supreme Being is recognised by some of the Siberian tribes, and the Yakuts "worship the *invisible God*" under *three* different names, which are called *Samans*, sacred.* Traces of the Hindoo Trimurti are also discernible in one of the Calmuck idols which is figured with three heads. The worship of the heavenly bodies† and of fire‡ is also prevalent, and particularly among the Tongoos, or Tungusi. The belief in the transmigration of souls, the veneration for animals, polytheism, and magical practices are all prominent features of Shamanism. Its leading and characteristic trait, however, consists in the class of priests, who are sorcerers pretending to a communion with evil spirits, and of whom it may be most emphatically said, that they are precisely identical with the conjurors or jugglers of the American aborigines.§

The Nomadic tribes of Siberia, like most of the barbarous Indian tribes, are probably the descendants of more civilized ancestors, and it is curious to perceive how, under the operation

* One of the titles of this deity, *Tanga-ra*, resembles that by which the triune god, said to have been worshipped in Peru, was known, *Tanga-Tanga*.—*Vega*, vol. i. p. 70.

† Sauer's Expedition, vol. i. p. 116.

‡ The Scythians worshipped fire.—*Herod.*, l. iv. c. 59.

§ Herodotus, l. iv. c. 69, mentions the art of divination as prevailing among the Scythians. The Shamans are also prophets and physicians, and cure diseases by supernatural means. The preparatory ceremonies for obtaining an interview with the evil spirits, and their feats of jugglery, are the same as those of the Indian sorcerers. They carry with them little images or amulets, which represent the forms in which these deities appear.

of similar circumstances, these two degraded branches of the same great race have still preserved a striking resemblance in their customs and character. Of those Siberian tribes engaged in venatorial pursuits, it may be asserted, that by the common consent of travellers, no people exists more alike in every respect to the aborigines. For the purpose of a brief comparison, one tribe may be selected.

The Tungusi,* a very ancient nation, who say their ancestors were the first inhabitants of Siberia, roam over the greater part of that region. Like the Indians, they are subject to few diseases, and possess the senses of sight and hearing to an incredible degree of perfection.† They are faithful, honest, and hospitable, mindful of kindness and injuries, proud, and tenacious of their personal dignity. Dances are customary among them, and the most favorite of their social pleasures are songs, and fanciful tales of an Oriental character, resembling those of the Algonquin nations. Remarkable for the faculty of remembering natural objects, and localities, they retain, with the most accurate fidelity, the recollection of every rock and tree in their hunting grounds, can describe a road distinctly by these landmarks, and trace their way hundreds of miles over a pathless country without hesitation. They are brave and robust, hunt with the bow and arrow, are excellent archers, and follow the game by the trail, or impression left on the earth, as well as if the animal were bounding in full view. The women perform the chief burden of domestic and predial labor, while the ruder sex engage in the hardships of the chase. Enduring of cold, fatigue, and privations, many days are frequently passed by them with-

* Strahlenburgh, p. 451. Tooke, vol. ii. p. 99.

† Cochrane, pp. 140, 166.

out food, and when fortunately game has been killed, they feast in an extravagant, wasteful, and voracious manner, without thought of the future,* and never leaving the spot till all is consumed. Polygamy is allowed, and wives are purchased by presents to the parents. They clear the soil for the reception of grain, by girdling the trees, and annually, in the autumn, burn the grass upon the steppes or prairies.† The boundaries of their hunting grounds are marked out, and any aggressions beyond them resented by force. The dead are not buried, but suspended from trees in boxes, or placed upon scaffolds.‡ Their bodies are tattooed with much taste and skill,—the moccasin and wampum are used in their dress,—the latter being employed for decoration, as is often the case among the Indians.§ They are fond of smoking, and whilst so employed, pass the pipe around like the American calumet. In all these particulars, resembling closely the Indian, it is impossible to point out any nation, so exactly the counterpart of the Americans.

A few analogous customs may also be indicated. The Indian custom of shaving the head, with the exception of a single ringlet upon the crown, is of very general use among the Mongols. It is probably as ancient as the time of Herodotus, who describes it accurately, as it was practised by the royal Scythians. The same historian details the often quoted description of Scythian scalping in these words: "Their mode of stripping the skin from the head is this. They make a circular incision behind the ears, then taking hold of the head at the top,

* Cochrane, p. 155.

† Spark's *Life of Ledyard*, p. 238.

‡ Sauer, p. 49.

§ Loskiel, pp. 48, 49. Ledyard, pp. 246, 251.

they gradually flay it, drawing it towards them. They next soften it in their hands, removing every fleshy part which may remain, by rubbing it with an ox's hide; they afterwards suspend it thus prepared from the bridles of their horses, when they both use it as a napkin, and are proud of it as a trophy. Whoever possesses the greater number of these, is deemed the most illustrious."* A little image found among the Calmucks, establishes the fidelity of this description: it represents a man mounted on a horse, and sitting upon a human skin, with scalps pendant from his breast.† The same author states that upon the interment of a Scythian chief many of his retainers were slaughtered at his tomb, which was the case also with the Natchez and other American nations, and with the Mongols.‡

The Siberian and Chinese dog is of the same species as the American; in America the dog was domesticated even with the remote Fuegian tribes. An analogy has been indicated between the ideas of the Egyptians as emblemized in the figure of Anubis, and those of the Mexicans in relation to the *techichi*; but the same superstitions were of much wider extent. Dogs were venerated in Egypt, and their death was lamented as a misfortune. According to Bryant, the Egyptians represented under the figure of a dog all such as had the management of *funerals*. Traces of the same idea, says Dr. Clarke, appear in the *stélé* upon some of the ancient tumuli, which were sculptured with the figure of this animal, as a type of the Egyptian god *who had the care of the dead*. The dog was anciently held in great reverence by the Hindoos, and was sacred to Kala-Bhairava; the practice still prevails of employing this animal to

* Lib. iv. c. 64.

† Pennant, vol. i. p. 260.

‡ Barrow, p. 483. Strahlenburgh, p. 30.

watch by the dead, from the belief that he perceives evil spirits, and terrifies them by his howling; for the same reason he is placed by the couch of the dying. With the Siberian and American tribes he was selected for a similar purpose, and was sacrificed also in cases of sickness and death. Besides the Mexicans, many other aboriginal nations were accustomed to kill these animals at the celebration of the funeral rites; this may be observed even of the distant tribes of South America.* The Indians, says Mr. Andrews, are generally accompanied by a black dog; this animal "is his master's friend through life, and the destined pilot of his voyage to the promised Elysium hereafter. To arrive at this happy land rivers are to be crossed, and the dog is to convey over his master's provisions, a store of which is always inhumed upon his decease."† The Indians of Canada, according to Charlevoix, during the last sickness of a chief, were accustomed to "cut the throats of all the dogs they can catch, that the souls of these animals may go into the other world, and give notice that such a person will arrive there soon."‡

The Siberians and Americans are both extravagantly addicted to the use of the vapor bath.§ In health it is a favorite enjoyment, and in sickness a usual remedy for all diseases. The Mongols, like the Indian, never hesitate whilst suffused with

* King and Fitzroy, vol. ii. p. 167. Davis' China, vol. ii. p. 310. Tooke, vol. iii. p. 223. Sauer. Nuttall's Arkansas, p. 96. Mod. Trav. India, vol. viii. p. 253. Penn, p. 120. Ward, vol. i. p. 264. Wilkin-son, vol. ii. p. 33. Herod., l. ii. c. 66. Clarke's Travels, vol. iii. p. 131.

† Anderson's Travels in S. Am., vol. ii. p. 75.

‡ Voyage, vol. ii. p. 141. § Sauer, p. 177. Malte Brun.

perspiration to rush from these baths and plunge headlong into the coldest streams. They were employed also by the Mexicans, and the same method of producing the vapor by throwing water upon heated stones was universally practised.* A few additional particulars may be mentioned: the *Yourte* or Mongol hut resembles the American wigwam;† the constellation of the Great Bear is known by the same name with the Indians and the Siberians;‡ they agree in calling the *Aurora Borealis*, “the dance of the dead,” or “dancing spirits;” in using masks in religious ceremonies;§ and in the methods of interment, either placing the dead upon scaffolds like some of the western aborigines, or burying them in a *sitting posture*, or burning them. The peculiar form of the plumes of the head-dresses, the use of leggins, and the employment of the wampum as an ornament for their garments, assimilate the costumes of both people.|| White is a sacred color; the same method of storing corn in magazines in the ground is used; there are some traces of the institution of the *totem* in Siberia; for the purpose of procuring fire, they sometimes use an instrument consisting of a cylindrical piece of wood which is inserted in the hole of a circular disk and rapidly turned; this is to be found also in

* Herodotus describes a similar bath in use among the Scythians, l. iv. c. 75.

† Ledyard, 241. Sauer, 130.

‡ The bear is venerated by both races; and after having killed one in the chase, it is usual to celebrate the event by an expiatory feast, during which songs are addressed to his *manes*, descriptive of his praises. *Malte Brun. Charlevoix*, vol. ii. p. 56.

§ Pennant, vol. i. p. 238. Bartram's Travels, p. 43.

|| Trans. Lit. and Phil. Soc. Quebec, vol. i. p. 240.

America, and even so far south as Chile.* And finally both people practise the custom of tattooing.†

The Chinese. So many of these traits and customs are common to the Chinese and Indo-Chinese, that it becomes unnecessary to dwell at length upon the resemblance to be observed between those nations and the Americans. The Brahmins maintain that the Chinese are a mixed race, and that at some ancient period, an emigration proceeded into that country from Hindoostan; it seems, therefore, that they are to be regarded as the descendants of Hindoos and Mongols—one of the circumstances which may serve to account for the striking resemblance in the features of their religion, and many of their institutions, to those of the Hindoos and Mongols.‡

Not only were symbolical paintings and writings of ancient use in China,§ but it appears also, that the method of recording events by knotted cords, the *quippos* of the Peruvians, the *wampum* of the Indians, was likewise known.|| It is said, that “among some Tartar tribes, it is customary to enregister remarkable events by knotted cords, or by stringing beads on cords.”¶ To these facts, may be added the testimony of Ledyard, who says “the *wampum* so universally in use among the Tartars, apparently as an ornament, I cannot but suspect is used

* Molina, vol. ii. p. 167.

† The Scythians tattooed, according to Pomponious Mela as quoted by Lafitau.

‡ Asiatic Tracts, vol. i. p. 219.

§ Drummond's Origines, vol. ii. p. 311.

|| Hum. Res., vol. i. p. 28.

¶ Major Mercer, in Trans. Lit. and Phil. Soc. Quebec, vol. i. p. 255.

as a substitute for letters in representing their language by a kind of hieroglyphical record.”* It is interesting to observe in both continents, the similar forms which certain arts and customs have assumed, by a decline in civilization—the change from the knotted cords of the Mexicans, Peruvians, and Chinese, to the wampum of the Indians and Siberian nomades.

The game of chess is clearly Oriental; and Molina asserts, that it was known to the Araucanians by the name of *Comilcan*, and that they had possessed it “from time immemorial.”† The sign of the rabbit led the Mexican year, and was of a divine character; in China, it was not only one of the signs of the zodiac, but was also sacred to the moon. In one of Grosier’s engravings we see it as emblematic of the moon, represented as turning one of those cylindrical machines for producing fire just described, and which were used in China and America.

Of the religion of the Chinese it may be stated without detail, that it appears to have recognized the existence of the Supreme Being, and the immortality of the soul; to have become ultimately degraded into the worship of the sun and celestial bodies, the worship of fire,‡ the consecration of animals, the belief in numerous spirits, and the arts of divination and magic. The expiatory self-punishments, the rosaries and the divine *triad* remind us also of the various ancient cults, which have been considered.§ The reverence for the dead is here carried to its

* Spark’s *Life of Ledyard*, p. 251. † Molina, vol. ii. p. 108.

‡ Drummond’s *Origines*, vol. i. pp. 386, 387. *Asiatic Res.*, vol. ii. p. 377. Davis’ *China*, vol. ii. p. 102.

§ “Fo is one person, but has three forms,” according to the Chinese books.—Davis, vol. ii. p. 103.

utmost extreme, for they absolutely *worship*, and *sacrifice* to the spirits of their ancestors. In the month of August, the Tlascalans of New Spain celebrated the festival of the dead, when they offered oblations for the souls of their departed friends; in the same month, occurred the Chinese festival, the ceremonies of which consisted in chanting masses for the dead, and in making religious offerings for their use in another world. Similar superstitious rites were common among the barbarous aboriginal tribes.

The Chinese style of architecture seems to have been formed after the model of the tent, but in some of the ancient structures, and more remarkably still in the tombs, the form of the terraced pyramid is to be perceived.* The cemeteries often consist of three terraces rising one above another, and surrounded by a circular wall adorned with the figures of men and animals. Tumuli also appear in their burying grounds; and it is said they formerly were accustomed to preserve the bodies of the dead by exsiccation, that species of embalming which was sometimes used by the ancient Americans. It was usual formerly, as in Mexico, to put to death a number of the retainers of a deceased emperor or noble, at his interment.*

The remaining points of resemblance may be briefly described. The Chinese and Indo-Chinese nations, in common with the Mongols, delighted in dramatic entertainments; they shave the head with the exception of a single ringlet upon the crown; some of these nations still practise tattooing, for which others have substituted the custom of painting their faces; many of the Chinese towns in the interior, are surrounded with earthen fortifications, the sides of which correspond with the

* Barrow, pp. 70, 222, 224, 227, 336.

cardinal points, and the gates of which are protected on the exterior by curtains of earth ; the Chinese costume is similar to that worn in some parts of South America ; their rule interdicting marriage between persons of the same surname, resembles the Indian prohibition against intermarriage between persons of the same clan ; quails were sacred birds among the Mongols, and they were sacrificed in Mexico to the Sun ; the roads, canals, and walls of the Chinese and Mongols, are analogous to those of the Peruvians and Mexicans ; the skulls of enemies killed in battle were preserved as trophies, and converted into banqueting cups ; and the Cyclopean arch of receding steps is to be observed in the Chinese buildings.*

* Crawford's Siam, vol. i. p. 284 ; vol. ii. p. 9. Barrow, pp. 4, 61, 63. Coxe, pp. 215, 223. Arch. Am., vol. ii. p. 109. Davis, vol. i. p. 268. Thunberg's Trav., p. 204. Molina, vol. ii. p. 82. Du Halde, vol. ii. p. 250.

On the altar of the ancient temple of Hercules at Cadiz, where a fire was kept continually burning, "quails were sacrificed because Hercules had been restored by them to life."—*Bryant*.

The Chilians, as well as the natives of Darien and the West India islands, practised a method of taking water-fowl, precisely identical with that customary among the Chinese.—*Molina*, vol. ii. p. 23.

"Our road," says Captain Andrew, "lay along the banks of the Rio Chico. The population along this road is entirely Indian, under a regular Alcade government, and they inhabit the luxuriant borders of a stream which are irrigated and cultivated with even Chinese economy. It struck me as curious, too, that their dress resembled the Chinese, as well as some peculiarities in their manners." "The head apparel of the working-class so much resembles the Chinese, that I almost fancied myself in the paddy-fields in the vicinity of

The Malays and Polynesians. The nations of these two great families present in their language, appearance, and institutions, such decided features of resemblance, that it is impossible to resist the conclusion, that they are all of common origin. From south-eastern Asia appears to have issued that stream of population which has flowed to the numerous isles of the Pacific, and extended at least to Easter island, more than eight thousand miles from the shores of Asia, and within eighteen hundred miles of the American coast. On the other hand, these nations are assimilated to the Mongols, and though their languages differ, there seems to be good reason for supposing an original, but very ancient connection between them.* The brown colored tribes of Java, and other islands of the Indian archipelago,† though distinguished by several unimportant differences, belong, physically, to the same race—and we shall, therefore, without distinction, trace such analogies as may be discovered among any of these nations to the American aborigines. The Malays use a rude species of knotted cords, resembling the *quippos*, as a method of recording and remembering

Whampoa." * * "They secure their doors with wooden locks of the Chinese principle."—*Andrews' Travels in S. Am.*, vol. ii. pp. 141, 73, 78.

* Barrow, pp. 34, 35, 123, 237. Marsden's *Sumatra*, p. 296.

† Their principal physical characteristics are a brown color, high cheek bones, small black eyes, long lank black hair, and scanty beard. "These Javans," says Linschoten, "are of verie fretfull and obstinate nature, of color much like the Malayans, and not much unlike the men of Brasilla."—*Linschoten's Voyages*, p. 34, in *Crawfurd*. The New Zealanders *tattoo* their persons with certain "*heraldic ornaments*."—*King and Fitzroy*, vol. ii. p. 579.

numbers;* in common with some of the Polynesian islanders, they tattoo; and compress and flatten the heads of infants;† they formerly cut the hair short, some tribes shave the whole head, save a single lock on the crown;‡ they pluck the beard; and it was one of the early customs to distend the lobes of the ears to a monstrous size. Some of the natives of the Pacific islands interred their dead in a *sitting posture*;§ others expose them upon scaffolds, like some of the tribes of our western Indians;|| they also practised a method of embalming similar to the American, the body being preserved by exsiccation, without removing the entrails. After being wrapped in numerous folds of cloth it was then interred, or placed upon the temples:¶ these embalmed remains resemble closely the mummies found in the Kentucky caves, both in the method adopted for their preservation, in the wrappings or mummy cloths, and in the texture and fabrication of the latter. The skulls of the dead, as well as those of enemies, were often preserved in the family for many generations, as was the case also with the nations of the Indian archipelago, the Mongols and some of the American tribes. The Malayan and Javanese graves are frequently surmounted by a simple mound of earth. “Among the many customs common to the Indian islanders,” says Mr. Crawford, “there is none more universal than the veneration for the tombs

* Marsden, p. 63.

† King and Fitzroy, vol. ii. p. 527. Marsden, p. 45. Porter's Voyage, p. 114.

‡ Crawford's Ind. Arch., vol. i. p. 218. Porter's Voy., p. 111.

§ Ellis' Polynesian Res., vol. i. p. 304.

|| King and Fitzroy, vol. ii. p. 567.

¶ Ellis, vol. i. pp. 3, 5. Marsden, p. 287.

of ancestors. When the Javanese peasant claims to be allowed to cultivate the fields occupied by his forefathers, his chief argument always is, that near them are the tombs of his progenitors. A Javanese cannot endure to be removed from these objects of his reverence and affection, and when he is taken ill at a distance, begs to be carried home, at all the hazards of the journey, that he may sleep with his fathers. * * In Java, conformably to this feeling, there is an annual festival on the eighth of the month of Shawal, held in honor of ancestors." The ancient Malayan burying places, according to Mr. Marsden, "are held in extraordinary reverence, and the least disturbance or violation of the ground, though all traces of the graves be obliterated, is regarded as an unpardonable sacrilege." In the Pacific islands also, a festival was observed at the ripening of the year, similar to the American "festivals of the dead," when they prayed for the souls of the deceased.* In relation to another usage, we must again cite the testimony of Ledyard. "I have thought," he says, "since my voyage with Captain Cook, that the same custom (scalping) under different forms, exists throughout the islands in the Pacific ocean. It is worthy of remark, that though the Indians at Owyhee, brought a part of Captain Cook's head, yet they had cut all the hair off, which they did not return to us. I have also frequently observed the islanders to wear great quantities of false human hair. All savage nations are fond of preserving some badge or testimonial of the victory over their enemies of this kind. The ancient Scythians and North American Indians have preserved the scalps, and among the South Sea islanders, teeth and hair are in repute; all of them giving preference to

* Ellis, vol. i. p. 270.

some part of the head.”* In the character of all these nations may be perceived that same fortitude and capability of patient suffering, connected with a spirit of revenge, which distinguish the American aborigine. Their courage, however, is not of a bold and daring character, but their military enterprises are conducted with great caution, and by frequent resort to artifice and stratagem. Captives receive but little mercy, and if they escape tortures and death, it is only to be placed in the bonds of slavery.† “The Indian islanders,” says Mr. Crawford, “are passionately fond of flowers,” and Humboldt makes a similar remark of the Mexican Indians.

These nations believe in dreams, omens, sorcery and enchantments, and have a superstitious attachment to relics. The curing of diseases is accompanied with spells and incantations. The priests are physicians, who like the aboriginal sorcerers pretend to an influence over evil spirits, which are the cause of sickness. They have amulets or images; consult the deities, oracles, and sacrifices, for prophetic disclosures of the secrets of the future;‡ they wear masks in religious ceremonies;§ and formerly human sacrifices were common. The custom of putting to death the relatives of the deceased, existed in the Indian and some of the Polynesian islands. “I have no doubt,” says Mr. Crawford, “that one, parallel to that of the Natchez of America, prevailed, very generally, in the Indian islands,

* Ledyard, p. 251. Porter's Voyage, p. 90. Tour through Hawaii, p. 145.

† Crawford's Ind. Arch., vol. i. p. 247.

‡ Polynesian Res., vol. i. pp. 30, 34, 277, 283, 302.

§ Mareden, p. 388.

wherever arbitrary and despotic authority was fully established." Many of these nations believed also in the doctrine of the transmigration of souls, and in that of future rewards and punishments; and they were not backward in the practice of austerities and expiatory punishments.

It may be added that the Cohans and other Brazilian tribes, the Araucanians and Peruvians* all wore the *Poncho*,† which is indetical with the Polynesian *Tiputa* or cloak; that the South American and Polynesian girdles are similar; that the Pacific and Indian islanders were skilled in the art of fortification, and constructed earthen or stone fortresses; that the same blind and superstitious adoration was paid to the person of their monarchs by both people;‡ a species of vapor bath is used in some of the Oceanic islands; they betray a fondness for dances, and these are often of a religious character;§ that professed storytellers, and dramatic entertainments afforded a principal amusement; that some of the tribes were skilled in the working of metals, and that one of the systems of enumeration presents a resemblance to the Mexican in reckoning by tens, twenties, forties, four hundreds and eight hundreds.|| The art of irrigation, and of cutting the slopes of the mountains into terraces

* Henderson's Brazil, p. 213. Molina, vol. ii. p. 52. Ellis, vol. i. p. 186.

† The Poncho is worn in all the provinces of South America, which I visited."—Stevenson, vol. i. p. 41.

‡ Ellis' Poly. Res., vol. iii. p. 81.

§ The people of Celebes had their "war-dances."—Crawfurd, vol. i. p. 122.

|| Crawfurd, vol. i. pp. 55, 120, 183, 241, 258, et seq.

for the purpose of cultivation ; the sacred enclosures or cities of refuge ; the art of making paper ; the traces of picture* or symbolical writing ; the arabesques and meanders which are cut on the war clubs, and even tattooed upon the bodies of the natives of the South Sea islands ;† the earthen and stone tumuli ; and the pyramidal edifices,—all approximate these people to the American aborigines,‡ besides many other customs which it is unnecessary to detail,§ and the affinities in language and religion which have already been indicated.

The Malays secrete their names like the Indians ;|| in the Indian archipelago the natives use the *sarbacane*, a long tube for discharging poisoned arrows, which is precisely the same instrument as the *Esgaravatana*, used by the South American Indians who live on the banks of the Orinoco and Madeira rivers. The latter is described as a hollow reed through which even-

* The most ancient Javanese manuscripts were written upon leaves of the Loutar, which were strung together by cords. The Siamese were folded like the Mexican in a zigzag manner.

† Lang's View of the Polynesian Nations, p. 230.

‡ "Various points of resemblance might be shown between the aborigines of America and the natives of the eastern islands of the Pacific, in their modes of war, instruments, gymnastic games, rafts or canoes, treatment of their children, dressing their hair, feather head-dresses of the chiefs, girdles, and particularly the tiputa of the latter, which in shape and size exactly resembles the *poncho* of the Peruvians."—*Ellis' Hawaii*, p. 441.

§ The customs of the Huilli-che, the native inhabitants of Chiloe, on the American coast, it has been remarked are similar to those of the Polynesians.—*King and Füzroy*, vol. ii. p. 338.

|| Marsden, p. 292.

omed arrows are discharged by a puff of the breath.* Several of the plants and trees useful for food and in the arts are common to America and the islands of the Indian archipelago and appear to be indigenous in the latter place. These are the yam, the indigo plant,† the banana, the arnotto, and the Sappan or Brazil wood. Tobacco is most extensively used in south-eastern Asia; Ledyard, who was never restrained from uttering a bold conjecture though opposed to the settled opinions of the learned, says of the "Tartars," that when they smoke the pipe, they "give it round to every one of the company. The form of the pipe is universally the form of the Chinese pipe. I expect to find it in America, since the form of the pipe on the tomahawk resembles it. * * As the Chinese pipe is found universally among the Siberian Tartars, I think it probable that the custom of smoking migrated with them to America, and thence by Sir Walter Raleigh made its way east to England." The tenacity with which this production has retained the original Haytian name in all parts of the world, tends to prove its

* Crawford's Ind. Arch., vol. ii. p. 222. Henderson's Brazil, p. 473. Hum. Pers. Nar., vol. v. p. 545.

† The coloring matter of the indigo plant, in the Indian archipelago, is known by the Sanscrit name *Nila*. The Persian, Sanscrit and Arabic *nil* signifies blue. The indigo of the Nile is called Nilé by the Arabs. Anile is said to be the American name for the same plant, from which the Portuguese Anileira was taken; and so exact a coincidence has led to the belief that the American term is of European origin.—*Clarke's Travels*, vol. iii. p. 106. *Crawford's Ind. Arch.*, vol. i. p. 458. *Mod. Trav. Guatemala*, p. 209. *Drummond's Origines*, vol. ii. p. 79. The turkey is generally supposed to be originally from America; but Malte Brun says this bird is called in German the "cock of Calicut."

American origin, though the practice of smoking is claimed by the Chinese to have been customary among them from a great antiquity.* Humboldt and most naturalists have decided that the maize (*Zea Maiz*) "is a true American grain, and that the old continent received it from the new." Now according to several of the aboriginal traditions this plant was considered to be of a foreign origin; for example, in Mexico, it was said to have been introduced by the Toltecs. It is true that by the testimony of Herrera and other Spanish writers, and by the quantities of this grain found in the granaries and *huacas*, there can be no doubt of its existence in America before the discovery. But the real question is, whether it was indigenous to any other portions of the earth. The name applied to it by the early voyagers was Turkey corn, and for this reason Durante erroneously considered it as indigenous to Turkey. But M. Bomare ascribed it to Asia, and the testimony of Mr. Crawford is most explicit to the same point.† "After rice," he says, "maize or Turkey corn is the most important production of agriculture among the great tribes of the (Indian) archipelago. The word *Sagung*, which I imagine to be purely native, is the term by which this plant is known from one extremity of the archipelago to another. There can therefore be little doubt, as in the case of rice, that one tribe instructed all the rest in its culture. *As far as a matter of this nature is capable of demonstration, it may also be conjectured that maize was cultivated in the Indian islands, before the discovery of America, and that the plant is an indigenous product.* The name bears no analogy to that of any language

* Bell's Travels.

† Crawford's Ind. Arch., vol. i. p. 366. Stevenson, vol. i. p. 44.

of America, although in respect to their other exotic productions, whether animal or vegetable, either the native term, or one which points at the origin of them, is invariably preserved in the languages of the Indian islanders.”*

Mr. Crawford has argued that the early civilization of the Indian archipelago originated from Java, and Dr. Lang, an able and zealous advocate of the common origin of the American and Polynesian nations, considers the Indian archipelago to have been the original point of departure. If this conjecture be correct, the era of the migration is to be placed in the earliest ages, and certainly before the period when the art of writing was introduced into Java. The relics of antiquity which are observed throughout the Oceanic islands favor this idea. “The nations inhabiting the islands of the Pacific,” observes Mr. Ellis, “have undoubtedly been more extensively spread than they now are. In the most remote and solitary islands occasionally discovered in recent years,—such as Pitcairn’s island, on which the mutineers of the *Bounty* settled, and on Fanning’s island, near Christmas island, midway between the Society and Sandwich islands,—although now desolate, *relics of former inhabitants have been found*. Pavements of floors, foundations of houses, and stone entrances have been discovered; and stone adzes or hatchets have been found at some distance from the

* In a recent work upon Egyptian antiquities, we find an engraving of one of the Egyptian altar figures, “which holds in the right hand something which very much resembles a head of maize or Indian corn,—which, however,” observes the author, “it cannot be, as that grain was introduced into Europe from Virginia.”—*Egyptian Antiq., Lib. Ent. Know.*, vol. ii. p. 30. *Wilkinson*, vol. i. p. 397.

surface, exactly resembling those in use, among the people of the north and south Pacific, at the time of their discovery." The most extraordinary of these monuments are the temples, which are regular terraced pyramids, and which are found even in Easter island,* the nearest the American coast. In conclusion, Dr. Lang, on the authority of La Perouse and other navigators, and from his own experience, seems to have obviated the objection which has been opposed to the easterly course of the Polynesian migrations, in consequence of the usual prevalence of easterly winds, by showing that at certain seasons of the year, westerly winds are not uncommon in certain latitudes; besides, this argument is based upon the supposition that these islanders have never been more advanced in the art of navigation than at present, which is far from being demonstrated.†

* Roggewein, in *Mavor*, vol. iv. p. 146.

† There exists one tradition to the effect, that the original inhabitants came from the west, and brought with them several domestic animals.—*Ellis*, vol. i. pp. 99, 71.

CHAPTER XI.

THE PYRAMIDS.

ANCESTRAL Veneration was the most striking characteristic of the various families of the Red Race; and in truth this religious sentiment distinguished most of the primitive and cultivated nations. Of the three methods of sepulture, inhumation, embalming and cremation, the first was the most ancient,*—the literal fulfilment of the original decree, “dust to dust.” With the deceased were deposited articles destined for his use in another life, or emblematic of his profession and pursuits, and eventually large portions of his wealth. When illustrious persons or chiefs died, the simple hillock over the grave was swelled into the mound or *tumulus*, the easiest and earliest method of commemorating his distinction.† The sepulchral pile was then surmounted by a statue or pillar of stone. The Celtic mounds of the British isles are often found with immense blocks of stone on their summits; “the pile or heap,” says Dr. Clarke, “was generally nothing more than a lofty mound of earth, more rarely it was a magnificent pyramid. A square platform was left in

* *Monumenta Kempiana*, p. 153. Pliny, vii. 54. Cic. de leg. ii. 181.

† It was a law of Odin that the memory of distinguished individuals should be preserved in this manner: “Mandavit etiam, ut optimatibus magnos tumulos in memoriam erigerent”—Vide *Ledwich*, p. 42.

some instances upon the tops of these pyramids as a pedestal for the stélé. This seems to have been the case upon the summit of the principal temple of Djiza.”* Above the tomb of Porsenna, a series of pyramids was erected; upon the *tumuli* of Achilles and Patroclus still visible near Sigeum, formerly stood stélé; the Polynesian pyramids were surmounted by statues of stone; and upon the Mexican teocalli were the statues of the gods. It was a primitive usage to worship upon high places, and the tumuli, already sacred, would naturally be preferred. Indeed such uses originated directly from the feeling of reverence for the dead; the eastern nations, even now, *worship* at the tombs of their ancestors; and in ancient Italy, before the tomb stood an altar upon which incense was burnt. The tumulus thus became to be devoted to religious services, and temples were built on its summit; but even in the more finished form of the pyramid, its sepulchral uses were still preserved. The Irish word *cill* or *kill* at first denoted a grave, and afterwards a church;† Athenagoras styles the temples of the ancients *Taqoi*, or tombs; and this name was afterwards given to the Christian temples, when the custom of burying the bones of martyrs in them was first adopted.‡ According to Bryant,§ the artificial mounds in Greece, Egypt and Syria were crowned with towers and temples; and the authorities are numerous among the ancients writers which prove that it was customary to erect sacred edifices upon sepulchral *tumuli*.|| The pyramids and mounds

* Herodotus, ii. 149.

† O'Brien.

‡ Walpole's Memoirs, p. 231.

§ Bryant, vol. ii. p. 127.

|| “Tumulum Antiquæ Cereris, sedem que sacram venimus.”—*Æneid*, l. ii. v. 742. “Et tot templa deum quot in urbe, sepulchra Heroum numerare licet.”—*Prudentius*, in Davies.

have sometimes been supposed to have been treasuries, fortifications, and astronomical observatories, but the treasures usually deposited in the sepulchres, the care which was taken to preserve them from hostile attack and desecration by surrounding them with enclosures, and the preference for this style of temple-building by the Sabea nations, sufficiently refute these ideas.

We proceed now to trace these structures from the Old world to the New. The Temple of Belus, or Nimrod's tower, as it is now called by the Arabs, was a truncated terraced pyramid, consisting of eight stories, three of which can still be perceived. It was constructed of burnt brick strongly cemented together, was surrounded at its base by a quadrangular wall, and had a tower upon its summit, the ascent to which was made by flights of steps around the edifice. Enormous mounds of brick-work on the eastern bank of the Euphrates, indicate that other structures of the same description formerly existed.*

The Egyptian pyramids are the most ancient monuments in that country, and the epoch of their erection is placed by some so early as three hundred years after the deluge.† The pyramids of Jizeh are not strictly analogous to the American in their form, having been perfect cones probably cased from the summit to the base.‡ But the sarcophagus found in one of them, the rectangular enclosures which in part surround them, their accurate position relative to the cardinal points, and the re-

* Heeren's *As. Res.*, vol. ii. pp. 156, 173.

† Wilkinson, vol. ii. p. 256; vol. i. p. 19.

‡ The expression of Herodotus in relation to the steps which existed before the coating was finished is curious; he calls them "altars." Lib. ii. c. 125.

mains of a temple in front of the second and third pyramid, all conduce to assimilate them to those of America, and to indicate their combined sepulchral, religious and astronomical uses * It is to be observed also, that the rocks upon which they are built are filled with catacombs, "the vaults of the hill," and the plains in their vicinity are called Kahi-Mhan, "the land of tombs," an appellation similar to that of the plains of Teotihuacan, which are called "the Road of the Dead." But others of the Egyptian pyramids, and those which with some reason it has been supposed are the most ancient, are precisely similar to the Mexican Teocalli. As we proceed south from Jizeh to Saccara the style of these monuments changes, and they appear of every form, size and structure, from the simple earthen mound to the more perfect terraced pyramid.† The pyramid at Medun has a square base, and consists, like that of Cholula, of several retreating platforms or stages,‡ the lowest of which is about twenty feet high, and it is composed of sun-dried brick. One of the pyramids of Saccara is built with six terraces of stone, each twenty-five feet high and eleven wide.§ Two pyramids to the west of the pyramids of Jizeh, consist each of

* The pyramids of Cholula and others of Mexico, and some of the great mound-temples of the United States, contained chambers and the skeletons of the dead.

† "Clarke's Travels, vol. iii. p. 309.

"The crude brick remains about Memphis are principally pyramids" crumbled into decay.—*Wilkinson*, vol. i. p. 50. According to Herodotus, Apychus erected a brick pyramid.

‡ Denon says the number of platforms is five, and that they are composed of stone. Vol. i. p. 317.

§ Clarke, vol. iii. p. 108.

four receding platforms, which are ascended by high narrow steps: the summits are platforms.* The pyramids of Abousir are formed of brick, and four miles to the south of Saccara is one constructed of the same material, but in a dilapidated state; sufficient remains, however, to show that it consisted of five, if not six terraces, each ten feet broad and thirty feet high; the height of the whole is one hundred and fifty feet.† All these edifices face the cardinal points.‡ The porticoes of the Nubian pyramids indicate their use as temples, and one of the largest “has been built in stories, but is most curious from its containing within itself another pyramid of a different age, stone and architecture,”§ and which reminds us of the double tower of Palenque.

It is interesting to perceive the same type in the tombs of the brown colored race of Madagascar. A mound of earth is thrown up over the grave, which “is surrounded by a curb of stone work, and a second and third parapet of earth is formed within the lower curb or coping, generally from twelve to eighteen inches in height, each diminishing in extent as they rise one above another, forming a flat pyramidal mound of earth, composed of successive terraces with stone facing and border, and resembling in appearance the former heathen temples of the South Sea islanders, or the pyramidal structures of the aborigines of South America.” The summit of these pyra-

* Egyptian Antiq., Lib. Ent. Know., vol. ii. p. 238.

† Pococke, p. 167. Wilkinson, vol. i. p. 131.

‡ The same position may be observed even in the ancient temple of Jupiter Ammon.—*Minutoli*, p. 166.

§ Waddington, p. 176.

mids is ornamented with large pieces of rose or white quartz; and they are often twenty feet in width and fifty in length.

India. Passing next to India, we there find that the oldest forms of the pagodas are pyramidal, a feature of Hindoo architecture, which distinguishes it strongly from that of the greater part of Asia, where the tent has been the object of imitation.* At the present period, small earthen tumuli abound in the vicinity of the villages of Bengal; brick pyramids are occasionally encountered; and most of the pagodas of the Carnatic are either complete or truncated cones. At Benares, there is a pyramid formed of earth, and covered with bricks; and another composed of brick work, which has been originally cased with stone; the size gradually diminishes, and the summit is a mere mass of ruins.†

At Hansi, one hundred and twenty-six miles from Delhi, is a structure in the shape of a truncated pyramid, one hundred feet in height. The exterior slope of each side is faced with brick, and inclines at an angle of seventy-two degrees;—the superior platform has been in recent times occupied by a palace, but probably this monument was anciently a temple.

Upon the Ganduck river is a singular edifice, likewise constructed with brick. Its shape is that of a cylinder placed upon a truncated cone: the diameter of the base is three hundred and sixty feet, and the height of the whole one hundred and fifty-seven.

At Sehwan, a place of great antiquity upon the Indus, is an enormous oval mound of earth, surrounded from the base to the

* Heeren's *As. Res.*, vol. iii. p. 68.

† *Mod. Trav. Ind.*, vol. vi. p. 262; vol. viii. p. 85.

summit with a brick wall. It is twelve hundred feet long, seven hundred and fifty broad, and is said to resemble the tower of Belus.* In Nepaul, upon a hill called Simbi, are some tombs of the Lamas and people of distinction, several of which are pyramids finely ornamented and sculptured.

The pagoda has been originally formed upon the model of the pyramid. Those of Deogur, in the vicinity of Ellora, three in number, are built with huge blocks of stone placed one upon another so as to form a pyramid, the summit of which is crowned with the trident of Mahadeva.† The beautiful pagoda of Tanjore two hundred feet high, that of Madura, and the black pagoda of Juggernaut are all pyramidal edifices of hewn stone piled up in large masses. One of the improvements in the construction of the pagodas, is the enclosure or wall, which was subsequently added, surrounding the base, and composed of brick or stone. These contained large areas, and their sides faced the cardinal points. The entrances to the pagodas of Raimseram, which are surrounded by walls, are in the shape of a truncated pyramid, and similar to the Egyptian propyla. The more ancient Hindoo temples bore no inscriptions or sculptures, but the outer walls of others are covered with figures of animals, men and gods, like the Mexican, and subsequently, whole scenes from the great epic poems were added.‡

The ancient temples of Hindoo origin in Java, are of the

* Burne's Travels in Bokhara.

† Heeren's As. Res., vol. iii. p. 74, etc.

‡ The word pagoda is by some said to be derived from Bhagavati, "Holy house;" by others, from the Persian Putkedeh, "House of idols." The Sanscrit appellation Devalaya signifies "House of the gods," a name similar to the Mexican.

same character. They are almost all pyramidal buildings, and are composed either of brick or stone,—the outer surface of the stone temples has been coated with a fine stucco, and in the interior is to be perceived the Cyclopean arch. They are constructed with great solidity, they face the cardinal points, and the walls are covered with sculptures which have been executed after they were laid, as the same figure or group occupies several blocks. The groups of temples, called “the thousand temples” are pyramidal; they are approached, through “four entrances facing the cardinal points of the compass, and each guarded by two gigantic statues representing warders.” “The temple of Boro Budur, situated in the mountain and romantic land of Kadu, is a square building, of a pyramidal shape, ending in a dome. It embraces the summit of a small hill, rising perpendicularly from the plain, *and consists of a series of six square ascending walls, with corresponding terraces*, three circular rows of latticed cages of hewn stone, in the form of beehives, and finally, of the dome already mentioned. * * * *There is no concavity except in the dome. The hill is in fact a sort of nucleus for the temple*, and has been cut away and fashioned for the accommodation of the building.”* The same author, from whom this description is taken, mentions another class of Javanese temples. “They may generally be described,” he says, “as consisting of a succession of terraces, for the reception of which, the sides of the mountain are scooped out. There are three of these terraces at Sukuh, and no less than twelve at Kätto. The length of the terraces at Sukuh is no less than one hundred and fifty-seven feet, and the depth of one of them eighty. The entrance at Sukuh, is by a flight of steps

* Crawford, vol. ii. p. 198.

through a triple portal. At Katto we have similar ones, up to the twelfth or last. The terraces are chiefly occupied by statues and sculptured figures of animals.”*

The Chinese style of architecture is probably imitated from the tent, but in the cemeteries and more ancient temples, we recognise the graduated pyramid. This is particularly the case in the construction of the altar to heaven in Pekin. This edifice stands in a square enclosure, three miles in circuit. The terrace consists of three stages, diminishing from one hundred and twenty to sixty feet in width, each stage being surrounded by a marble balustrade, and ascended by steps of the same material.†

The temples or *Marais* of the Polynesians, were of a pyramidal form, and encompassed with stone enclosures.‡ These pyramids were composed in steps or terraces, with a level area upon the summit, and were often of large dimensions. The graduated pyramid of Atehuru was two hundred and seventy feet long, ninety-four wide at the base, and fifty feet high. The outer stones consisted of coral and basalt, were well hewn, and regularly laid. Another temple still standing at Maeva is one hundred and twenty feet square, and one at Ruapua, in Owyhee, is formed of immense blocks of lava, and is one hundred and fifty feet long by seventy broad.§ Easter island contains the most remarkable structures of this kind. They are all erected with layers of stone cut with great precision, and upon their summits are enormous colossal statues of the same material, some of them twenty-seven feet high, and representing

* Crawford, vol. ii. p. 199.

† Davis' China, p. 362.

‡ Ellis, Pol. Res., vol. i. p. 261.

§ Ellis, vol. iv. p. 101.

human figures.* Of these Mr. Ellis gives us the following description. "The most remarkable objects in Easter island, are its monuments of stone work and sculpture, which, though rude and imperfect, are superior to any found among the more numerous and civilized tribes inhabiting the South Sea islands. These monuments consist of a number of *terraces*, or platforms, built with stones, cut and fixed with great exactness and skill, forming, though destitute of cement, a strong durable pile. On these terraces are fixed colossal figures or busts. They appear to be monuments erected in memory of ancient kings or chiefs, as each bust or column had a distinct name. One of these, of which Forster took the dimensions, consisted of a single stone, twenty feet high and five wide, and represented a human figure to the waist; on the crown of the head a stone of cylindrical shape was placed erect; this stone was of a different color from the rest of the figure, which appeared to be formed of a kind of cellular lava. In one place seven of these statues or busts stood together: one which they saw lying on the ground was twenty-seven feet long, and nine in diameter."†

* Ellis, vol. iii. p. 242. Beechey's Nar., pp. 30, 37, etc.

† Ellis, vol. iii. p. 325.

CHAPTER XII.

CONCLUSION.

THE facts adduced in the course of the preceding investigation tend, it is conceived, to support the following conclusions:

I. That the three great groups of monumental antiquities in the United States, New Spain, and South America, in their style and character present indications of having proceeded from branches of the same human family:

II. That these nations were a rich, populous, civilized and agricultural people; constructed extensive cities, roads, aqueducts, fortifications, and temples; were skilled in the arts of pottery, metallurgy, and sculpture; had attained an accurate knowledge of the science of astronomy; were possessed of a national religion, subjected to the salutary control of a definite system of laws, and were associated under regular forms of government:

III. That from the uniformity of their physical appearance; from the possession of relics of the art of hieroglyphic painting; from universal analogies in their language, religion, traditions, and methods of interring the dead; and from the general prevalence of certain arbitrary customs, nearly all the aborigines appear to be of the same descent and origin; and that the barbarous tribes are the broken, scattered, and degraded remnants of a society originally more enlightened and cultivated:

IV. That two distinct ages may be pointed out in the his-

tory of the civilized nations—the first and most ancient, subsisting for a long and indeterminate period in unbroken tranquillity, and marked towards its close by the signs of social decadence; the second, distinguished by national changes, the inroads of barbarous or semi-civilized tribes, the extinction or subjugation of the old and the foundation of new and more extensive empires: and,

V. That the first seats of civilization were in Central America, whence population was diffused through both continents, from Cape Horn to the Arctic Ocean.

In relation to the question of their origin, it appears:

I. That the Red race, under various modifications, may be traced physically into Etruria, Egypt, Madagascar, ancient Scythia, Mongolia, China, Hindoostan, Malaya, Polynesia, and America, and was a primitive and cultivated branch of the human family: and,

II. That the American aborigines are more or less connected with these several countries, by striking analogies in their arts, their customs and traditions, their hieroglyphical painting, their architecture and temple-building, their astronomical systems, and their superstitions, religion, and theocratical governments.

It has long been a favorite theory, to trace the aborigines to a Tartar or Mongol migration from Siberia, by Behring's straits. But the Mexicans and Peruvians resemble the cultivated nations of Oriental Asia, even more closely than do the ruder tribes, the Siberian nomades; in fact they are *all* of the same race, and both in Asia and America, a decline into barbarism has produced analogous developments, which in connection with the relics of their ancient religion and customs, nearly

assimilate the savages of both continents. It is not to be denied that there are some tribes in North America, which may have proceeded in modern times from Siberia, for example, the Chippewyans,* and perhaps the Sioux, the Osages, Pawnees,† and some of the north-western nations,‡ but even in relation to these, the proof depends mainly upon vague and uncertain traditions. But to suppose that the Mexicans, the Toltecs, the Chiapanese, the Mayas and the Peruvians, were the descendants of such degraded and savage hordes as occupy north-eastern Asia; or that they wandered from more southern Asiatic countries through the cold and inhospitable regions of the north, without leaving any vestiges of civilization on their way, appears equally contrary to experience and philosophy. The ancient monuments in Siberia are situated to the west and to the south, those of America are limited in their extent on the north-west; and in spite of the facility of communication afforded by the contiguity of the two continents in that direction, these facts would seem to be decisive of the question. On the other hand, the evidences of an early knowledge of the compass in China, of the great maritime skill of the Malays and of their navigation, in remote ages, of the Asiatic seas, the facts stated in relation to the peopling of islands by the accidental drifting of canoes, and more than all, the actual proof of the distribution of population over the numerous and distant islands of the great Pacific, from Asia to Easter island, render it unnecessary to resort to the violent hypothesis of a northern route. What greater obstacles were there, to impede a passage from

* McKenzie's Journal, pp. 387, 113.

† Pike's Expedition, part i. p. 63; part ii. p. 9, 14.

‡ Sauer, pp. 160, 177. Cox, pp. 151, 257.

Easter island to the American coast, than attended a migration to Easter island? Indeed this island itself appears to have been successively occupied by different families; and its pyramidal edifices, and its colossal obelisks and statues are closely analogous to the American monuments.

When and by whom was America peopled? This interesting question, if it shall ever be solved, of course can be answered only in a general manner. The character of American civilization is not wholly indigenous. Its mutual diversities are no more than might naturally arise when nations of the same stock are separated; its uniformities are great and striking, and exhibit, in common, an astonishing resemblance to many of the features of the *most ancient* types of civilization in the Eastern hemisphere. The monuments of these nations were temples and palaces; their temples were pyramids; their traditions were interwoven with cosmogonical fables, which still retained relics of primitive history; and their religion was sublime and just in many of its original doctrines, though debased in their superstitious abuse and corruption. In all this there is nothing modern, nothing recent; these features are not strictly Hindoo, Egyptian, or Chinese, though they approximate the aboriginal civilization to that of each of these nations. The origin of this resemblance is to be traced back to the *earliest ages*, when these great nations first separated, and carried into Egypt, Hindoostan, China and America, the same religion, arts, customs and institutions, to be variously modified under the influence of diverse causes. The great diversity of American languages, the few analogies they present to those of the old world; the absence of the use of iron; certain peculiarities in their astronomical systems; and some of their own traditions which have preserv-

ed the memory of the great events of ancient sacred history, and attribute the colonization of the continent to one of those tribes who were present at the dispersion of mankind, all tend to support this position. The Red race, then, appears to be a *primitive branch of the human family*, to have existed in many portions of the globe, distinguished for early civilization; and to have penetrated at a very ancient period into America. The American family does not appear to be derived from any nation *now existing*; but it is assimilated by numerous analogies to the Etrurians, Egyptians, Mongols, Chinese, and Hindoos; it is *most closely* related to the Malays and Polynesians; and the conjecture possessing perhaps the highest degree of probability, is that which maintains its origin from Asia, through the Indian archipelago.

The most remarkable peculiarity in the institutions of all these nations, is their religious character. Laws, government, the arts and sciences, and the whole routine of private and public affairs were under the direction of the priesthood. Thence several consequences flowed,—the preservation from a rapid decline into barbarism, so long as religion retained its supremacy,—the utter absence of all progression and improvement,—and the stereotype character of the whole system of society. The sciences were occult, long religious probations were necessary before their principles were taught, and thus no generation possessed an advantage over the preceding one. Knowledge and civilization were not animate and instinct with natural warmth and vigor, but were embalmed, and like a shrivelled mummy, presented the mere outward form with none of the vitality of existence. From this continued religious subjection originated, also, that unchangeableness, that fixed and immutable character

which distinguished all these nations, and which is a marked and prominent trait even of the savage Indian. An inflexibility which adheres tenaciously to old forms and customs, and despises change; which may be overpowered, but never yields; and which, in view of the dreary impending fate of the aborigines, possesses an air of melancholy grandeur; for, as one of those coming events which "cast their shadows before," the absolute extinction of this ancient race seems to be rapidly and irresistibly approaching. Upon this continent, the pure types of the new and the old era of civilization have met and encountered each other. The family presenting the one, having occupied this vast region for countless ages undisturbed by the approach of other and modern races, had been allowed the amplest scope for development. And yet at the discovery the greater portion of the continent was inhabited by savage hordes; within the United States, the barbarous tribes appear to have been greatly depopulated, and the ancient and cultivated nations to have become extinct; even in Mexico and Peru the civilization of the first ages seems to have surpassed that of later times, and society generally was in a state of decadence. The old system,—its moral and social elements,—its capacity for self-improvement,—had thus been fairly tried and tested; and the time had arrived when a new race, and the Christian religion, were appointed to take possession of this soil.

THE END.

